THE

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Agriculture, Horticulture, and Rural Economy.

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THE BASKET WILLOW.

We are pleased to know that there is a growing interest manifesting itself in regard to the Basket Willow, with those who own land suited to the purpose of propagating and growing this valuable plant, which of late has entered so largely into the commerce of the world.

Many an eye-sore on the landscapes of our State —many annoying and worse than worthless spots on its surface, deleterious to health, because they are fruitful sources of miasma, will, we hope ere long, be converted into green healthy places, covered with the graceful willow, yielding not only revenue, but absorbing the miasma of those swamps, that would otherwise be disseminated and breed sickness, sometimes even unto death. A general conversion of these swamps in a whole neighborhood into willow patches, would improve the health, add to the wealth, and increase the intrinsic value of the farms of the entire community.

It seems almost incredible, that over and above all the willow grown in this country, we should import annually four or five millions of dollars worth of basket willow. Millions sent out of the country to France and Germany for an article so easily grown by ourselves, and which would improve the beauty and the value of our farms, by the utilization of otherwise unproductive and pestiferous bogs.— The demand is on the increase steadily, hence there is no fear that too much will be grown.— Home production and the immense importations as yet have failed to supply the demand. We learn from the statements of those who have cultivated this willow, the salix viminalis, that it will yield two tons per acre on suitable soil, properly planted and cultivated, and the cost of cultivating and preparing for market would not exceed thirty or forty dollars per ton. Good willow will we understand, bring from $150 to $300 per ton in the market.— This shows that it is a very profitable crop. We know some persons who have grown it on a small scale, and they say it is very profitable, but they happened to have only small spots suitable to it and did not therefore enter largely into the business, hence were not justified in getting machinery for the peeling, drying, &c., therefore proportionally it cost them more to get it into market, and their profits were less than otherwise they should have been. Those who have grown it extensively say that it can be grown profitably at $50 per ton, after the third year from planting. One writer, several years ago, estimated that willow cuttings three years old will pay an interest the year after planting of about twenty-five per cent.; the second year of at least fifty, and by the fourth year the crop ought to yield one and a-half ton per acre. The same writer says: "Capitalists are generally contented with an interest of ten per cent. per annum; while here is a business that will pay at least ten times that amount. There are hundreds of thousands of acres of land at present in this country not paying two and a-half per cent. per annum, which might be planted in willow, and would yield an immense profit."

There are from 180 to 200 varieties of the willow that are known to botanists and horticulturists, but the chief are, the one we have just alluded to, the *Huntington* or Salix Capua, and the Salix Alba, white or Bedford willow. The last is very rapid in its growth, giving a good shade in three years, and is valuable for planting around fish ponds; its wood is fine grained and capable of as fine polish as rose wood. It is used for boot trees, gun stocks and house timber. It is stated than an acre of this species of willow, ten years old, sold in England for 155 pounds or 775 dollars. Its bark is fine for tanning. The *Huntington* is used for hoop poles and live-fences. In England the farmer plants the cuttings and incline the upper ends to meet and then tie them with a willow withe, forming thus a sort of trellis, for two years. They annually cut off the tops and sell them to the basket maker, thus they secure a fence and a crop from the same ground. It grows on upland, though moist low ground would perhaps suit it better. This and the white willow

are more like, in their requirements, our common willow. For much of these facts we are indebted to a correspondent from New York to Hunt's Merchant's Magazine in 1852.

We do not advise our friends to go at once very extensively into the business. It is best to try a half an acre or one acre, and learn by practice and enquiry of the initiated, all about it before a large expenditure is made. We feel sure however that once undertaken it will not be lightly abandoned. We have had no personal experience in growing willows, but give the mode of culture and general management of the plant, according to our information derived from reading the subject, and from our observations of some small patches we have seen grown, and the rods prepared for market.

The ground intended for planting must be drained sufficiently to be plowed. Grub and clean off all the bushes, under growth, tussocks, &c. Plow it as deep as it can be. Harrow and keep it clean and get it in as good order as the nature of the ground will admit, against the time for planting, which may be any time this month or first of next, or early in the spring, after freezing weather has past. When ready to plant, open furrows with the plow 4 feet apart, set the cuttings two feet apart in the furrow, draw some earth against them, tramp the earth and then fill up the furrow so as to leave one or two buds above ground. Or, if the ground be light, they may be stuck into the earth by the side of a line. Keep the ground free from weeds and grass, and sometimes irrigate if it can be done.

The cuttings should be from 8 to 12 inches long. At the end of the second year cut off the main stock close to the ground, and then so continue to cut each year about July; or as soon as they have attained the right size. When cut, peel off the bark and set them up against poles resting on forks, to dry, or on the barn floor, or on scaffolds under open sheds if the weather is not very dry. The scaffolds may be made of planks or poles. There are machines which facilitate greatly the work of peeling off the bark and twigs, leaving the rods clean and smooth. The process is very expeditious and thorough. When dry the rods are tied with willow withes, or bark, in convenient sized bundles, the rods in each bundle being the same length or very nearly so, and they are ready for market. It takes for any kind of willow about 13,000 cuttings to plant properly an acre.

The stock can be readily increased from a few well grown trees or young bushes. We believe the cuttings are to be had at a low price from any of the larger nurseries, or from any person who raises the willow. Those who do not know where they are to be obtained would do well to advertise in our journal, or some other paper, their want of these cuttings, and it would be well for those who have them for sale to advertise likewise, for we are confident there will be a demand for them this autumn or next spring.

We would advise our friends to try some of the two other sorts we have mentioned as well as the basket willow, and cultivate them for the purposes we have explained they are best adapted, and for which they are cultivated with great profit in England and continental Europe. Instead of the United States importing willow ware, and willow for manufacturing, large quantities of both should be exported. It is the great draw-back to success in our agriculture, this sending millions out of the country to buy what we could raise with great ease and small expense of either capital or labor, if we had the proper energy and exercised our reflective faculties more.

When our people will read and reflect more, then they will see the magnitude and importance of this and many other things which are now looked on as too trifling and too small industries to engage their attention and bestow any labor upon. It is a fatal error in our system of farming which we sincerely hope time will correct.

In draining the ground for willows, the ditches should be so arranged that by closing the main one the ground could be flooded when required. Irrigation is a great help. The willow, like the cranberry requires much water or very moist soil to yield heavily. In properly cultivated and intelligently managed, there is no doubt immense profits per acre will result, but it is nonsense to plant them and then neglect their cultivation or mismanage the crop through ignorance, for it would be a total failure, besides a considerable loss, where the enterprise had been started on a large scale, hence we have urged a trial, but in moderation at first.

We append the following from a correspondent of the *Country Gentleman* on this subject, slightly differing from our suggestions as to the cultivation of Osier Willows:

"The average cost per acre for cutting and peeling will vary from $100 to $150, and the crop from 2,000 to 4,000 pounds per acre; the price obtained will vary with market and quality—say from five cents to eight cents per pound. It will require two years growth before any twigs are fit for market, and the orchard will hardly pay expenses before the fourth or fifth year, though on good soil the rapid growth may take off one year.

The best variety is the Welch, or bayleaf; put in the cuttings one foot long, four feet apart each way; cultivate carefully as for corn, and keep down all weeds until the trees are large enough to take care of themselves. In harvesting cut close to the stump as soon as the bark will slip in the spring; and after stripping dry in the *shade*; the whiter the twigs the higher the price.

Agricultural Calendar.

WORK ON THE FARM FOR OCTOBER.

This month is one of interest and constant employment to the farmer and planter. Housing the tobacco is to be finished. Wheat to be sown.—Corn to be cut off and prepared for husking. Fruit to be gathered and put away or sent to market.—Cider to be made, and many other things small and great, mingled between saving the crops already made, and preparing for those of the coming year, now engage the mental and physical energies of our rural population.

RYE.

If rye has not yet been sown, as it should have been in August or last month, no time is to be lost to sow it, although there are some excellent practical farmers who contend that is best to sow it in November. We totally disagree with them however, induced thereto by many years observation and enquiry.

WHEAT.

The greatest staple crop of the world is wheat, and therefore its importance is duly recognized.—In this region, experience has decided that from the first to the fifteenth of October is the proper time to sow it. Earlier sowing would likely produce a larger and earlier yield, but the Hessian fly would destroy it. Late sown wheat is not often attacked by the fly, but then the *rust*, another terrible enemy is sure to attack it just as it is heading. Hence it would seem that the time above named is most probably the best to avoid the two evils, although in it there is no security, for wheat sown at that time frequently is destroyed by both pests, what the fly leaves in autumn the rust sweeps off in early summer. The casualties attending this crop are however not much, if any, greater than those to which other great staples are subject, and hence there should not be so much grumbling against this great staff of human life.

To raise a good crop of wheat, the land should have a sufficiency of lime and potash. If it has not these, they must be supplied by artificial means.—A well prepared and judiciously compounded super phosphate at the rate of 300 lbs. per acre, will meet the demands of the crop in these particulars, yet the soil should he full of humus, supplied by the decomposed roots of plants, to ensure a large yield. Equal parts of ashes, lime and fine ground bones, thoroughly intermixed, form a capital substitute for other more elaborate admixtures. Just before the wheat is sown, sow the mixture and harrow it in.

It is best to have a clean fallow for wheat, that is, a yield on which a heavy grass crop was grown and mowed or fed off close by cattle and sheep.—It would of course been better to have had the whole of the grass eaten on the land, than had it removed. If the land was plowed early and a mass of vegetation turned under, it should be cross plowed and kept free from weeds by frequent use of the harrow—the Thomas' Smoothing Harrow is the best. The land being in a good, friable, clean condition with all the vegetable matter decomposed, and the fertilizer sown and harrowed in, it is ready to receive the wheat. S w one bushel and one peck of pure clean seed with the drill. The difference in the yield between drilling and hand-sowing will pay the cost of a drill, in a crop of forty acres.

Seed wheat should be soaked in a strong brine or saltpetre water, and then dried by rolling in lime. While in pickle it should be often stirred and all the scum and refuse which arises must be removed. In this way you get clean seed, and destroy the *smut* if it has it, or be a preventive to this enemy of the wheat. As soon as the field is sowed, run at proper distances, *water furrows*, where they are required. Some persons roll the field across these furrows, but we do not deem it important. On the contrary in many situations and on many soils, the rolling of small grain is disadvantageous.

Selection of Seed. Every man will likely have his preference, and we make therefore no mention of any choice on our part. We only state that the white wheats have of late years not given as much satisfaction as the red wheat. The *Fultz* originated in Pennsylvania, has been very favorably reported this year. One gentleman in Frederick county made 44 bushels average per acre on a field of 40 acres of *Fultz* wheat. This certainly was an astonishing yield. Several persons have informed us that this variety sown alongside other choice varieties, yielded much more to the acre. There certainly is a great deal gained by using pure seed from prolific, hardy kinds of grain, and wheat more than all grain, seems to require frequent change of locality and careful selection of seed.

After the wheat is in, as a final dressing, sow one bushel of plaster and three of salt, well intermixed, over each acre. This will strengthen the straw brighten the grain, and in combination with the fertilizers will produce other happy results. If no fertilizers are used, by all means sow the plaster and salt, and repeat the same dose next April.

GRASSES.

It is too late to sow all the grass seeds except timothy, which may be sowed any time this month, with the grain crops or by itself. Better sow it even in November than in the Spring. Frost wil

not kill it. Some may be thrown out by the frost in winter on stiff soils, but that can be saved if a roller is run over the ground as soon as it gets into that condition, so as to close the earth which the frost has split open and spued up.

BUCK-WHEAT.

Cut buck-wheat before the frost kills it. Save it carefully, and as free from dirt as possible. Get the grain out on a clean plank floor. Save the straw for milch cows. Most people throw it away as they do many other valuable things, because "they know not what they do."

WHITE-WASHING.

If time can be found, white-wash the out-buildings and fences. This is a good time for such work, though generally done in spring time, but as it often happens, that season occupies the labor of all hands about the farm in farm work which cannot be put off. It is therefore well to embrace any opportunity to perform this useful and ornamental work, and not put it off to any particular time. Poor Richard says, "put not off for to-morrow what may be done to-day."

DITCHING.

Drain all land which retains water, whether low land or high land.

PUMPKINS.

Gather your pumpkins before the frost injures them. Put them in some dry and airy place convenient for feeding the cattle and hogs. They are better boiled and thickened with bran or meal, as food for fattening hogs. Some persons boil small potatoes with them and mix in the mush or soup, anything like meal, grain of any sort, vegetables, &c. The pumpkin is a cooling, healthful, fattening vegetable for hogs and cattle, and no doubt increase the milk in cows. There is an idea prevailing with some that the seeds tend to make cows abort, but we do not believe it. But if so, the seeds are easily removed, and if nicely washed and dried sell for several dollars per bushel in the seed stores. They are worth saving, for sale.

STOCK OF ALL KINDS.

The work-beasts should be well fed and cared for. Milch cows fed morning and night to keep them up to their quantum of milk, for October is the month best adapted for putting up winter butter. Young stock must have good pasture or be grain-fed.

TOBACCO.

We presume that the tobacco crop is nearly all in the house. Such as may be standing ought to be housed as soon as its condition will admit, for fear of frost. Keep it clear of worms and succors, *top it low*, so the top leaves may ripen, and the whole plant be improved by increased size and weight of leaf as well as in color. That which has been housed ought to be examined often to see that it is not injuring for want of room and air. The houses ought to be tight, with many windows and doors, so that every good, clear airy day they may be opened and closed at night and during storms, damp weather or high winds. It cost time and strict watchfulness to cure a crop from now until December, but it will repay ten-fold. The crop of the United States is certainly very short. In Connecticut much less has been planted than last year, and in many of the tobacco sections in the west the crop from various causes has failed to a great extent, hence it must be inferred that good, sound, well handled tobacco will command reasonable and living prices the coming year.

ORCHARD.

The fruit of the apple orchard should be gatherd by hand carefully, so as to avoid bruising. Handle as little as possible, therefore assort the fruit as it is picked. The apples should be allowed to sweat for two or three days on a clean floor, or on straw under the trees, being put in small heaps, if the weather is dry. Then carefully barrelled and placed in a dry, cool shed or barn until cold weather. The barrels may be headed or not as most convenient. In packing in the barrels observe that there be uniformity in the size and form of fruit, as near as possible. Their market value depends much upon this. It wont do to have fine fruit at bottom and top and poor fruit in the middle. The deception or carelessness will soon be discovered and the price reduced greatly. Some persons use dry sand, saw-dust or chaff in packing, but we think it is of not much use, often an injury. To insure long keeping, the apple itself must be a good keeper, and great care taken to prevent any bruises.

Continue to dry fruit. The indifferent fruit will answer. The decayed and injured fruit can be fed to stock or ground up for vinegar.

CIDER MAKING.

This is the month when fine cider may be made, but later in the year perhaps the best cider is made. To have *good* cider, the apples ought to be sound, clean and somewhat mellowed, and perfect cleanliness in all the operation of grinding, &c. So much has been published heretofore in the *Maryland Farmer* about cider-making that we deem it a work of supererogation to enter here into details. We will only say, the barrels ought to be clean and free from all taint or bad smell. Keep the barrels full, during fermentation, with cider of the same making kept for the purpose. As soon as it ceases to actively ferment draw it off into other barrels and

at same time strain it through a blanket or muslin —common cotton—and if it ceases fermenting, add to it 4 lbs. of mustard seed, or as some recommend, sulphite of lime, then bung down.

A small gimblet-hole might be bored through the bung to let off for a few days any excess of gas, and then stopt up tight. To have it extra fine, it should be racked off the *third time*. We know that good cider always commands a high price, and it is admitted to be a wholesome and temperate beverage. It is valuable for either brandy or vinegar; far preferable to the vile decoctions called foreign brandy, or the vinegar which is manufactured so cheaply and which is so deleterious to health.—More cider ought to be made than is, and perhaps there would be less whiskey drank. The cider mills are so cheap and so easily worked that cider-making is but little more than sport for the boys, who should be given a share in the profits to excite their interest and assiduity in the work.

PLANTING OUT AN ORCHARD.

Select a place for the orchard and prepare the ground, as we suggested in preceding numbers of this journal, if it has not already been done. The land should be drained if necessary and judiciously located, neither poor, steep hill sides, nor low bottoms. It ought to be manured if not already in a fair state of fertility; and after a very deep plowing, put in nice tilth. Have the stakes driven where the holes are to be dug, and strict measurement by line with exactness of distance adhered to in laying off the orchard. Select good trees, not over three or four feet high, pruned low with good round heads, from the best nurseries, and if possible as near home as they are to be had, so as to encourage home enterprise. Plant them as soon as they arrive. They may however be planted any time until the ground becomes frozen. We would not advise a great variety to be planted. Of course each one who designs planting will obtain a catalogue from a reliable nursery and make his own selection, but we venture to name a few that do well in this region, we know from our own experience. For early summer: *Astrachan*, *Paine's Harvest*, *Early Joe*, *Paradise* and *Codling* apples. For Autumn: *Delasure*, *Winter Blush*, *Ladies Choice* and *Porter*. For Winter: *Winesap*, *Baldwin*, *Winter Catlin*, *Cart-house*, *Roxbury Russett*, *Black Cole*, *Belle Fleur*, *Green Pippin* and *Pomme de Api*.

Apple trees ought to be planted 40 feet apart and not trimmed higher than to have the lower limbs 4 or 5 feet from the ground when the tree becomes nearly full grown. Between the rows of apples we would advise the planting of Peach trees and dwarf Pears, in view of the high prices they command and the annually increasing demand for these fruits.

To such as may plant peach trees, we would strongly urge them if possible to get the old sorts, rather than go largely in the new varieties until their character is better established, and we name some that we know to be fine and suit the climate and soil of this section of country: *Troth's Early*, *Large Early York*, *Crawford's Early*, *Old Mixon*, both free and cling, *Lemon Cling Smock*, *free*, *Red Cheek Melocoton*, *Heath's late Cling*, *Yellow Rare Ripe*, *Susquehanna—Hoskin's large Cling* and the *Claret* peach for pickling.

Now while you are setting out fruit trees, let us advise you to plant a few *White Walnuts*, *English Walnuts* or *Madiera Nuts*, more properly speaking; *Spanish Chesnuts* and *Shelbark Hickory*; all form splendid lawn trees and very valuable as nut trees. Most of them are quick growing. We never have yet met with a man who having planted fruit trees, and gave them proper care, ever regretted his having done so. If fruit be scarce, the crop is worth almost as much as if it had been a plentiful one, and there rarely is ever a total failure.—The demand for fruits is inexhaustible since the art of *canning* enables the fruit packers to send it all over the world. In many foreign markets most of our fruits sell higher than exotic fruits do in our markets. The apples from the *Pell* farm in New York, bring as high sometimes as 25 cents each in England. The average price by the box or barrel is far above that of oranges. Beyond doubt before the expiration of the next decade the fruit trade of this couutry with Europe will be in extent of value second only, if not equal to the tobacco trade.—Now then is the time for all who have the advantage of water or rail communication with our mercantile cities, to prepare to reap the great benefits which such a trade will offer. *Beware of tree peddlers or self-styled agents.* Verb. Sat.

SHEEP.

About the middle of the month let the buck with the ewes. A good plan is to paint his breast and put ten or twelve ewes in a small yard with him at night and in the morning, the paint will tell which ewe had received his embraces. Continue this until the whole flock has been gone over, after that he can run with the flock. While in the small lot or pen, the buck should have plenty of water, grass or hay and grain. He will be at ease all the day and not lose flesh and vigor by chasing the young and shy ewes over a large field. Your lambs will come then nearly all together, and you will know when to expect them, and provide accordingly, so that not a lamb will be lost through carelessness or neglect. Where the buck is allowed to run with the flock all the year, one never knows when to expect their progeny, and it happens often, that a

dozen will be yeaned in some terrible storm of January or March perhaps, and all be lost. Sheep should be carefully salted, or have rock salt to go to as they wish.

HOGS.

The hogs intended for killing, ought now to be well fed night and morning, to keep them in growing condition, and that they may go in fine order into the fattening pens. A soup made of vegetables and fruits boiled and thickened with meal or mill feed is excellent food. New corn also.

GARDEN WORK.

GARDEN WORK FOR OCTOBER.

This month is not a laborious one for the gardener. Not much can be done in a small garden. However, what is required should be done and well done.

Cabbage.—Set these out after the 10th, or before, if the season be favorable. Prepare a dry bed, deeply worked, with plenty of manure. By the rake or harrow pulverise well and put it in fine tilth. Raise ridges six or eight inches high from east to west; set the plants on the *north side*, about half way the ridges, and six inches apart, to allow for dying out and other casualties, and for thinning out as collards next spring, leaving two feet between the plants intended for heading. The rows or ridges should be three feet apart.

Celery.—Continue earthing up the celery plants.

Endive.—Tie endives up for blanching.

Challots, Garlic, Chives.—Transplant the roots of these necessities for the kitchen.

Raspberry, Currant and Gooseberry.—Plant out these small fruits if you have not enough, or require a new lot of them, or either of them.

Seed Onions.—It is a proper time to set these out to bear seed early next year.

Asparagus.—When the stalks turn yellow, cut them off close and remove them. Dress the asparagus bed, by getting off all the grass or weeds, by the roots, if you can; forking up the ground after a dressing of well rotted stable manure, and a sprinkling of salt over the bed when it has been raked over after the forking.

Rhubarb.—Sow a small bed with Rhubarb seed.

Potatoes, Parsnips, Carrots and Beets.—These may be taken up toward the close of the month, but it is better to let the parsnips and carrots remain in the ground to be dug in small quantities as wanted.

Pickling Plants.—Plants such as horse-radish, chives, challots, &c., when taken up for seasoning pickles, should be carefully trimmed and the clusters of bulbs separated, and the small side roots of the horse-radish trimmed off close to the main stems. The last should be planted at once before getting dry, or tied in small bunches and buried like other vegetables, to be next year planted between the early cabbage, as Peter Henderson, in his capital book on gardening, recommends. The bulbs that are not wanted, for use or sale, may be dried and replanted, thus keeping up a succession. They require rich light soil, and kept free from weeds.

Strawberry beds.—See that the Strawberry beds are clean from grass and the runners cut off. The young vines will make a vigorous growth this and next month if properly attended to. If leisure offers the beds may now be mulched for the winter, with long rye straw, or short oat staw, leaves, &c., if the latter brush must be put over them to keep them in place until they are settled close by rains.

Dwarf Trees.—Set out dwarf Fruit trees this month. Set them deep enough to cover the place where the graft was inserted in the present stock. Let the ground be dry and deeply spaded and in good condition. Use no manure in the hill, unless an old bone or so put at the bottom of the hole.—After planting, bank the earth around the tree six or eight inches, in conical shape. Next spring this mound is to levelled, the ground around the tree well worked, and then mulched heavily, to keep moisture about the roots and protect them from the effects of the sun, besides, the mulch will keep down the grass.

Lettuce.—Set lettuce, place in cold frames, and some seed might be sown in a corner of the frame to furnish a succession of plants during winter.—Between the cold and hot beds, lettuce ought to be fit to be brought on the table whenever desired from now until spring.

CORN IN DELAWARE.—A correspondent at Middletown, Delaware, writes the *Peninsular News and Advertiser*—about the middle of August—that the fields of corn thereabout ought to take a premium at any State Fair; and that the plan pursued by the best farmers in corn culture, is

1. Thoroughly prepare the ground by plowing, harrowing and rolling, and repeating these operations if necessary.

2. To plant as early in the season as practicable.

3. To phosphate in the hill in order to give the young plant a good start.

4. To keep the cultivator going constantly and as long as possible, sometimes the plow is again made use of and the roller put on even when the corn is over a foot high. Shovel plows are used by some farmers.

For the Maryland Farmer.

APPLES AND APPLE TREES.

BY DAVID Z. EVANS, JR.

In the greed for peaches which farmers living in sections suited to their growth evince, the cultiva- of the Apple has been partially neglected. Taking the country through, there have, perhaps, been nearly as many apple trees set out as in former years, but the orchards already set out have not been quite as well attented to as in former years, many seeming to think that growing apples for market will not pay, while on the other hand advocating peaches as far more profitable. Now, each succeeding year goes to show me the great uncertainty of the peach crop, as well as the short life of the tree under ordinary circumstances. More trees of the Peach are condemned as worthless and rooted out before the age of fifteen or twenty years than afterwards. This fact may be due to a neglect in proper cultivation or it may not, but the fact that Peach trees last but a few years in a paying condition is a fact patent to all.

I do not wish to deter those who wish to raise Peaches from doing so, far from it; nor do I mean to advocate planting apple trees with the expectation of reaping very large rewards in a few years, for I have long ago divested myself of the idea that farming or fruit growing was a speculative enterprise; but I do say, and with good grounds, that taking a lapse of twenty years, apples will average more money per acre or per tree than peaches, while the apple trees will then be in their prime, good for many years, if well attended to.—And it is not next year's crop, or the crop the year after, that the fruit grower must look to for his gains, but patiently await the harvest, which will come in proper season. Of course do not plant apples to the exclusion of other kinds of fruits, but if you have none or but few on your place, put out several acres of the most approved varieties, and as few varieties as possible, and you will have something for yourself in after years, as well as a legacy to your children. I believe all kinds of fruits suited to the soil should be planted by every farmer or fruit grower, or by whatever name you may choose to style him, but for continuous profit for a number of years the apple and the pear stand at the head of the list, their longevity and general salability commending them to the tiller of the soil who looks into the future.

In selecting the varieties which will prove most profitable in any given locality, much care is requisite, and the great fault with many would-be fruit growers is to plant out too many varieties when two or perhaps four would have been best, though we do not restrict ourselves as closely with the apple as we have latterly done with the pear, of which two and three kinds comprise our later plantations.

To aid those who would wish to set out apple trees I will give a list of the varieties in both our young as well as our old orchards, marking those with a * which have proven good with us, so as to avoid a repetition.

In the old orchard we have *Maiden's Blush, Grindstone, Vandevere, *Russetts, Hays, Pennock, *Caleb *Townsend, Winesap and *Bellflower.—The trees are very old but have borne very good crops lately, owing to good cultivation and liberal manuring. They are good yet for several years and will return a fair profit. Besides the orchard, we have the entire space between the trees set out with currants and gooseberries, which will be another source of profit, besides insuring the trees good cultivation and liberal manuring each year.

In our young orchard we have such varieties as *Early Harvest, *Cornell's Fancy, *Caleb, *Maiden's Blush, Red Astrachan, 20 oz.; Rippin,*Smoke house, *King Tompkin's Co., *Fallawater, Smith's Cider, *Baldwin, Wagner, Strode's Birmingham, *Summer Queen, *Winesap, Roman Stem, *Townsend, &c. When we find that a variety does not suit our soil, our climate, or our trade, we intend to graft with some desirable variety and thus lose but two or three years in fruiting, still having a fine large tree. This we believe to be the proper method of doing away with unprofitable varieties of fruit trees.

Our young orchard has just come nicely into bearing this year, and it will take us until the fruiting season is over to determine on the relative merits of each variety for this year; and to give a decided opinion in reference to the desirability or worthlessness of any variety, we want at least two or three years of careful observation and experience. Merely one year's experience with a variety neither proves or disapproves the opinion of any one, for seasons vary to an appreciable extent, as do the fruitfulness of trees at certain ages.

Bay View Fruit Farm, Md., Aug. 26, 1874.

KEEPING APPLES.—A correspondent of the Boston *Cultivator* kept 1,200 barrels of apples, mostly Baldwins, in his cellar last winter, by daily expelling the stagnant air and replacing it with pure. He attributes the early decay of apples largely to a vegetable miasma in the air, which is communicated to it by vegetable evaporation under certain conditions. The effect of this miasma is first seen 'n minute specks on the apple."

For the Maryland Farmer.

SEEDING TO GRASS.

In the *Country Gentleman* of August 27th, are two articles from two of its best known correspondents, on the subject of Seeding to Grass, which are distinctly at variance, but which represent two classes of opinion on the subject of preparation for grass seeding. One claims the necessity of making the most thorough and careful preparation by deep plowing, &c., the other that the seed may be sown without ploughing, and the sod effectually renewed with almost no expense but the manuring, which is equally necessary in both cases. The point under discussion by both is the restoration of such portions of sod or grass land as may have "run out," as the phrase is, or become poor and unprofitable. One of these writers has the following:

"I have noticed mowing fields where many spots are winter-killed, "bound-out"; worms infest the field to the partial destruction of the crop, or from other cause, but partial crops are realized. My advice is, plow and re-seed this summer, or fall, at once; plow deep and well, then make the best possible seed-bed by using a pulverising harrow at different times till the surface is reduced to as fine tilth as sward land is capable of being reduced.—With this harrowing, I would apply and work in manure or fertilizers freely, unless I could command these, I would not make the attempt any farther than I could do it thoroughly. When the soil is well reduced, sow the seed with a liberal hand and harrow it in with a light seed harrow, or (which would be better) roll, to even and compact the surface."

In the other article the writer is advising as to the treatment of land with a view to a permanent sod for grazing or mowing, or both. He claims long observation and experience in England and in this country. He says: "Where Timothy and Clover are growing, or where they have grown and are wearing out, and it is desired to establish a permanent sod, it can be done if the soil is suitable (and even if the fertility is nearly exhausted it can be done,) but it takes a longer time and means to enrich the land. As good a way, and the quickest, is to put eight or ten sheep to the acre, and some young stock, cows and horses too, if convenient; let them run over it in autumn and into the winter, if the climate and weather admits. Have such sheep as it will pay to feed with oil-cake, or corn or grain, and feed the whole of the animals well.—The tramping is good, if there is not downright poaching. Continue a greater number of sheep on it all winter, if convenient. Then sow some blue-grass and other good grasses that are not coarse, or such as would kill out the finer fibered varieties, and roll and bush-harrow till the surface is smooth; then it would be well to shut up and not stock till the last week in May. Continue then to keep sheep, &c.; these which will pay for feeding oil-cake or oorn till the land is rich, by which time all the best natural grasses will have come into life, and then without any assistance there will be grass forever."

The point to which I set out to call attention, and have done so heretofore, is, that there is not the necessity commonly supposed for the elaborate preparation for seeding recommended by the first writer, I do so because this costly preparation is a great hindrance to the renewal of such lands. He represents such improvers as have ample means at command, and who take pleasure in what seems the most thorough and complete way of doing things without reference to cost. We must adopt our methods, however, as much as possible to the limited means of those who must economise to the utmost. This idea is represented by the second writer, who does not find it necessary to plough at all in order to get a re-set of grass, and to produce permanent grazing and mowing grounds.

It will be observed that the special purpose of the second writer is to take advantage of our natural grasses for permanent feeding grounds, and his treatment has reference to these. But it is equally applicable to the artificial grasses. Let any one test this for himself by sowing clover and timothy upon any thin spot of his stubble-field, even now, as late as October, and give it a moderate top-dressing. Keep all stock away from it and he will find that there has been no occasion for re-plowing. And so he will find that for all small grass seeds he will hardly get a surface too compact for them, if the conditions of surface fertility and protection against early grazing be duly observed.

The method of heavy stocking with sheep, cattle, &c., as recommended by the writer, has in view, it will be observed, the fertilizing of the soil by the use of extra feed with oil-cake and other enriching matter. This is, no doubt, the best treatment. The tramping of sharp hoofs during fall and winter upon closely grazed ground with the action of the frost, and the fertilizing by the rich droppings of highly fed stock, would make just the conditions required for the prompt and vigorous growth of whatever new seeds may be sown in February and would not destroy the roots of natural grasses already present.

Our people have not yet learned, however, the wisdom of this method of feeding, and are content for the most part with the profits that may be made from their pastures. In this case the stocknig of course must be a great deal lighter, and other means

of fertilizing the thinner portions of the field must be resorted to. The seed must be sown early in the fall, or so late that they will not vegetate before spring, and top-dressed with any home-made manure; or some reliable fertilizer must be sown with them, and a harrow or heavy bush, and roller used after. By such a method a pasture field, which may be occasionally mown, may be made with little expense, and at very small loss of time, from seed sowing to first of June. The natural grasses as blue grass, green grass, red-top, white clover, &c., start at once from their old roots, and soon a sod of the best quality is formed.

I venture to say, that in no way, can an old field which we wish to improve, be more economically and surely brought into profitable use, than by stocking to the extent of its feeding capacity with sheep, and treating it as here suggested. Extra food to the sheep will greatly expedite the process, and if given with judgment, add to the profits of the flock. N. B. W.

Tobacco Worm in Virginia.

A correspondent of the Richmond *Dispatch* writes:—In the lower part of Orange the tobacco crop is very much troubled with the tobacco worm.—Mr. R. B. Burnes, who lives near Woolfolk's store, in Orange, informed me that about seven hundred worms were killed one evening last week on eighty consecutive tobacco hills. He was surprised at this, as he had been using a poison so successfully in killing the tobacco flies. He can only account for the number of flies from the fact that so few of of his neighbors have planted tobacco, and they have all congregated on his farm. The poison used by him is very fatal to the fly. It is simply pulverized cobalt dissolved in water, sweetened with sugar. The solution is then poured in small quantities in the flowers of the jimson or Jamestown weed. The best time for putting it in the flowers is about sunset. It is a very common thing to find hundreds of dead flies in the morning lying around the weeds. The proportions about two teaspoonfuls of pulverized cobalt to about two fluid ounces of water sweetened to saturation with sugar. It can't be too sweet nor too strong with cobalt.

Sowing Grass Seed.—As to the quantity, a writer in *County Gentleman* advises half a bushel per acre of timothy and clover mixed in equal quantities, affirming that it is more economical to do this than to sow thin, since it is "penny wise and pound foolish" to be economical of seed, just so much of which should be sown as will stock every square inch of the ground with, at least, one growing plant.

For the Maryland Farmer.

CORN---100 BUSHELS THE ACRE.

In the September number of the *Maryland Farmer*, "Land Mark," gave a statement of how, to his own knowledge, a large yield of wheat was raised; and, in this article he will state how to his own knowledge, a hundred and more bushels of good shelled corn to the acre was made, on a five-acre piece of land, in the State of Illinois.

It was on new ground, a light, sandy ridge, bordering on the prairie, from which scrubby oak and hickory brush had been cut off the previous summer; and in the fall it was cleanly grubbed of roots, and covered with a liberal coating of stable manure, and plowed about six inches deep. The following spring it was plowed again about one inch deeper; then nicely harrowed, furrowed out three feet apart, then marked across three apart the other way—making hills three feet apart each way.

At each hill a small shovelful of well-rotted stable manure was placed, with a handful of old leached ashes, and the corn, five kernels to the hill, planted on it, and all covered up nicely about two inches deep with the hoe.

When the young plants were well up, so as to distinguish the rows, a handful of old lime, from the refuse of a kiln near by, was put on each hill, and all cleanly dressed out with the hoe, of lumps and weeds that disturbed the young corn.

It was carefully worked twice, after that, with a five-toothed cultivator, which completed the work till harvest.

The seed had been carefully selected the previous season, from stalks only that had two or more ears to the stalk; and then scarcely a stalk was found in this field that did not present two or three ears to the stalk.

The seed was soaked in weak salt brine, about six hours before planting, and rolled in plaster (gypsum) to dry it for planting.

When the young corn was about two feet high, or little over, it was all thinned out to two good stalks to the hill; and when ripe for harvest, the whole field averaged over four good ears to the hill; and when shelled gave 103 bushels sound, shelled corn to the acre; at less cost per bushel than where 50 or 60 bushels the acre is made. Calculate—good, large ears make two gills shelled corn; 130 good ears make a bushel shelled corn.

Land Mark.

We should provide for our age, in order that our age may have no urgent wants of this world to absorb it from the meditation of the next. It is awful to see the lean hands of dotage making a coffer of the grave!

LAWNS.

The most beautiful object in town or country, connected with dwellings, is a rich, velvety lawn, kept in good condition. Unfortunately, our country or climate is not well adapted to the preservation of lawns in their highest perfection as we see them through England. Our summers are usually hot and dry, and the winters bring frosts so severe that rich turf is displaced, and the roots of grasses destroyed. We can, however, manage to overcome the disadvantages of winter more easily than those of summer, as nothing can prevent the destructive influence of the fierce rays of the sun, and nothing can supply the want of rain. During the summer of 1873 no rain fell in the New England States from June 23 to July 24, and the rich and costly lawns connected with suburban residences near this city were burned to a crisp.—The sight was so melancholy that pleasure-riding for a time in a large measure ceased, and the fine drives around the city were comparatively deserted.

Lawns are occasionally injured in England by drought. The season of 1870 was specially severe. All over England the eye rested upon brown fields; and Hyde Park, Battersea, Bushy Park, and other lovely rural retreats around London, lost their deep green, and were for a few weeks unattractive.—This, however, was an exceptional season, and one like it may not occur for a dozen years.

It is possible in the country to do much to preserve lawns in good condition. The ground should be under drained, deeply pulverized, and thoroughly manured, before the seed is sown. If the land is naturally dry, underground drains aid in mitigating the effects of drought. The currents of moist air which are allowed to circulate through them in the heat of summer assist materially in affording sustenance to grasses. If any one desires to prepare a lawn and maintain it in the best possible condition, the preliminary work cannot be slighted.

During the present season we have laid down as a lawn about two and a half acres of ground, and shall add to it the present autumn about three acres more. The land was a pasture at the farm, upon Midlake Hill, where a stone dwelling has just been erected. It was deeply ploughed in the autumn of 1873, and during the past spring it was thoroughly pulverized by repeated cross-harrowings. After the ground was fully prepared, and fertilized with concentrated fertilizers, the seed was sown, consisting of a mixture of white clover, red-top, and timothy. The timothy in small quantity is an important addition to the seed, as it affords strong roots, and seems to protect the more tender grasses until they are vigorous enough to be self-sustaining.

The seed was sown on the 26th of April, and on the 19th of July a crop of succulent grass was cut, which, when dry, gave more than a ton to the acre. In the first cutting of lawn grass, much good judgment must be exercised. It will not answer to cut it too early, as the branching young leaves are needed to shelter the tender roots from the hot sun, and on the other hand it is injurious to allow it to become too thick and matted, as the shade and confined air kill the roots. In some cases it is undoubtedly well to sow with the grass seeds oats or summer rye, but we prefer the unmixed grass seeds if they can be sown early in the season. Our lawn is now in a fine condition of luxuriance, and with care, we hope to maintain it in a satisfactory condition if the seasons are moderately favorable.—*Boston Journal of Chemistry.*

Wash for Trees.

In reply to an inquiry whether lime is beneficial to an orchard, the Germantown *Telegraph* replies to a correspondent as follows:

Where apple orchards are kept permanently in grass, as they should be, a top dressing of lime, of say thirty bushels to the acre, every five years, will prove very beneficial. William Saunders, of the Agricultural Department Garden, at Washington, gives the following formula which, he says, has proved of the greatest benefit. Put half a bushel of lime and four pounds of powdered sulphur in a tight barrel, shaking the lime with hot water, the mouth of the barrel being covered with a cloth. This is reduced to the consistence of ordinary white wash, and at the time of application half an ounce of carbolic acid is added to each gallon of the liquid. Mr. Saunders further says: "I generally apply it in the spring before the leaves make their appearance, but I am convinced that it would be more effective if applied later; but then it is difficult to do so when the tree is in foliage." It should be applied, not to the stem of the tree, but to some extent to the main branches.

PROFIT OF QUINCES.—An Ohian, who has three-fourths of an acre of quince orchard, from which last year he sold 300 bushels of first-class fruit, spades the ground in Spring, and scatters a peck of coal ashes around each tree, applying at the same time a quart of salt, and another quart when the quinces are half grown.

Live Stock Register.

COURSE TO BE PURSUED IN PURCHASING A HORSE.

First. Examine the eyes in the stable, then in the light; if they are in any degree defective, reject.

2d. Examine the teeth to determine the age.

3d. Examine the poll, or crown of the head, and the withers, or top of the shoulders, as the former is the seat of Poll Evil, and the latter that of Fistula.

4th. Examine the front feet, and if the frog has fallen, or settled down between the heels of the shoe and the heels are contracted, reject him; as he, if not already lame, is liable to become so at any moment.

Next observe the knees and ankles of the horse you desire to purchase, and if cocked, you may be sure that it is the result of the displacement of the internal organs of the foot, a consequence of neglect of the form of the foot, and injudicious shoeing.

5th. Examine for interfering, from the ankle to the knees, and if it proves that he cuts the knee, or the leg between the knee and the ankle, or the latter badly, reject.

"Speedy cuts" of the knee and leg are most serious in their effects.

Many trotting horses, which would be of great value were it not for this single defect, are by it rendered valueless.

6th. Carefully examine the hoofs for cracks, as jockeys have acquired great skill in concealing cracks in the hoofs.

If cracks are observable in any degree, reject.

Also, both look and feel for ringbones, which are callouses on the bones of the pastern near the foot; if apparent, reject.

7. Examine the hind feet for the same defects of the foot and ankle that we have named in connection with the front foot. Then proceed to the hock, which is the seat of curb, and both bones and blood spavins.

The former is a bony enlargement of the posterior and lower portion of the hock-joint; the second a bony excrescence on the lower, inner, and rather anterior portion of the hock, and the latter is a soft enlargement of the synovial membrane on the inner and upper portion of the back. They are either of them sufficient reason for rejecting.

8th. See that the horse stands with the front feet well under him, and observe both the heels of the feet and shoes, to see if he "forges" or overreaches, and in case he does, and the toes of the front feet are low, the heels high, and the heels of the front shoes a good thickness, and the toes of the hind feet are of no proper length, reject him; for if he still overreaches with his feet in the condition described, he is incurable. If he props out both front feet, or points them alternately, reject.

9th. In testing the driving qualities, take the reins while on the ground, invite the owner to get in the vehicle first, then drive yourself. Avoid the display, or the use of the whip and if he has not sufficient spirit to exhibit his best speed without it, reject. Should he drive satisfactorily without, it will then be proper to test his amiability and the extent of his training in the use of the whip.

Thoroughly test his walking qualities first, as that gate is more important in the horse of all work than great trotting speed. The value of a horse, safe for all purposes without blinds, is greatly enhanced thereby.

10. Always purchase of the breeder of the horse, if practicable: the reasons are obvious.

SHEEP HUSBANDRY IN VIRGINIA.

John R. Woods, of Albemarle county, Va., writes the *Southern Planter and Farmer*, the following on Sheep Husbandry vs. Dogs. Maryland sheep raisers have had a sad experience in this way, and as there is no probability of relief from any other source, we would advise an application of strychnine, as Mr. Woods testifies it is of so *saving* a quality. He says:

I can think of nothing of more practical importance at this time than the protection of sheep from the depredations of the numerous hungry dogs which infest every part of our country. I commenced farming in 1837, and up to 1848 suffered annually, losing the larger portion of two fine flocks, my neighbors suffering also in a similar manner, though not to such an extent, as they had not embarked so largely in sheep-raising as I had. We came to the conclusion that sheep husbandry must be abandoned, if no plan could be devised to arrest the evil. I tried shooting all the stray dogs I did not know found on my farm. This, however, did no good, and necessity, the parent of invention, led me to seek another plan. I determined to erect a pen and put my sheep in it at night, and around this to place small pieces of bacon, contain-

ing strychnia, the smallest portion of which will kill a dog. A great number were killed, far and near, generally those which had a peculiar fondness for sheep. Being driven up just at dark, dogs coming into the field would trail them to the pen, where very soon they would fine their best medicine. I put out the strychnine generally during the fall, winter, and especially during the lambing season, when dogs are particularly destructive. I did this for many years, and lost no sheep, protecting not only my own flock, but my neighbors, until shortly after the close of the war, when my flock having been almost destroyed by soldiers and other rogues a few shades darker, I failed to administer my infallible remedy for a short time, and consequently lost several fine Cotswold ewes and lambs. Since the war, having to pay for my labor, I cannot afford to build pens, but put the pieces of bacon containing strychnia around my field, near paths and getting-over places, placing over them small flat rocks, chips and bark, to prevent birds from getting them.

I receive many letters on the subject of sheep-raising, and the universal complaint is the depredation of dogs and how to prevent this. My invariable reply is, not to rely on any expectation that our Legislature will do anything to arrest the evil by taxation so long as the owners of dogs exceed in number the owners of sheep. * * *

If the people will only follow my advice, thousands will be saved directly, millions indirectly; our mountains, hills and valleys would be covered with innumerable herds, thus bringing in handsome returns without the expense and trouble of cultivation; but few laborers would be needed; the fact demonstrated that sheep could be raised in safety would bring in a vast emigration from the North, as well as Europe; our lands would appreciate greatly in value, and our vast water-power be utilized by the numerous manufactories which would necessarily spring up.

Great Britain, at one time, found the production of the cereals annually becoming less, a fact of fearful import to continue without a remedy. Resort was had to the growing and feeding of sheep and cattle (a large portion of our State is not adapted to the latter), and the production of roots and different sorts of food for their maintenance in winter and spring, thus making a large supply of manure. The scale at once began to turn, and Norfolkshire and other parts of England, not naturally adapted to the growth of the cereals, by sheep husbandry were rendered fertile and productive.

This would gradually follow here, and I see no other mode of recuperating our exhausted and waste lands than to follow the paths pursued by our forefathers. It will require great care, energy, and attention to be successful in sheep husbandry. Our people must wake from their Rip Van Winkle slumber and mount the tide before they are hoplessly stranded on the beach.

Goldsmith Maid has again cut down trotting time. She made a mile in 2:14 at Mystic Park, Bostom, on the 2d, beating her Rochester time by three-fourths of a second, and winning $2,500 thereby. But as she had the track to herself, was accompanied by a running mate, and all the circumstances were unexceptionably favorable, perhaps it is not really a greater achievement.

USEFUL RECIPES.

FISTULA AND POLL EVIL.—These sores are produced on the shoulder and poll by a bruise on the museles, causing swelling and fever. The enlargement may be reduced and scattered by blistering, roweling, and using Wizard Oil. After it breaks, the pipes must be eaten out with caustic potash; after the potash has been on forty-eight hours, dress the sore with four ounces spirits turpentine, four ounces tallow, and two ounces calomel, well mixed together; the potash and ointment should be applied every two or three days; keep the parts affected clean with soap and water.

THROAT DISTEMPER is nothing more nor less than a bad cold. As soon as you discover that your horse has distemper, bleed him two or three gallons from the neck. Give him a quart of good whiskey per day. Poultice the neck with wheat bran. Give him a tablespoonful of assafœdita dissolved in alcohol.—Give him plenty of *gentle* exercise.

Let him inhale smoke from tar, feathers, and old leather, burnt in a pan, held to his nose.

WEAK OR INFLAMED EYES.—Make an incision in the small vein on the side of the face, five inches below the eye, so as to bleed freely, rowel below the eye on the jaw-bone, apply a blister just back of the eyes, wash well with cold water three times per day, dissolve eighteen grains sulphate of zinc, ten grains sugar of lead in six ounces of soft water, and with a small glass syringe apply the wash to the eye once a day; if this does not relieve in five or six days, bleed two gallons from the neck-vein, give him a physic-ball, or bran mashes.

SPRAINS IN THE STIFLE.—*Symptoms:* The horse holds up his foot, moans when moved, swells in stifle; this is what is called stifling. There is no such thing as this joint getting out of place. It gets sprained the same as any other joint, and the patellar may slip from its place which acts as a stay to the joint.—The tendons and ligaments become contracted, and lameness follows. To relieve it, foment the joint well, stimulate it with some strong liniment or a slight blister.

BLISTER FOR RINGBONE AND SPAVINS.—Take cantharides two ounces, mercurial ointment four ounces, tincture of iodine three ounces, turpentine four ounces, corrosive sublimate three drachms; mix all well with one pound of lard. After it has blistered well, dress it well with Calomel Salve.

SORE THROAT.—*Symptoms:* the horse hangs his head down, chews, but cannot swallow; throat swollen and feverish. Apply a poultice of wheat bran wet up with a strong decoction of red oak bark. Give him tepid water to drink, with moderate exercise.—If he is feverish, bleed him two gallons from the neck.

LIQUID BLISTER.—Take one pint alcohol, ½ pint turpentine, four ounces ammonia, four ounces oil organum, one ounce naphtha; apply this with sponge every three hours until you feel the skin thicken.

BLISTERING PASTE.—Take four ounces pulverized cantharides, two ounces turpentine, two ounces English rosin; two ounces beeswax; melt all together over a slow fire until dissolved; rub it on well with the fingers.

TO REMOVE WARTS.—Pare the old skin until the wart bleeds, then apply a little caustic potash, which will kill the roots immediately. Oil well the following day,

HORTICULTURE.

CELERY.

In the old times the great effort was to get celery as large and as heavy as possible. A stick about the size of an ordinary fence post would surely get the prize at an exhibition, and indeed most of that which was the most popular was about the size of an ordinary base ball club. This taste for the tremendous, necessitated peculiar modes of culture. The beds for the young plants had to be dug a foot or so deep, and the rows of plants had to be set four feet apart, in order to afford earth enough to draw up around the plants when blanching time came.

We have advanced over this old notion in this that a tall sort is no longer desirable. The dwarfer and stockier the better; and this is rendered still more worth aiming at since it is found as a rule that a short thick set plant of celery is much more likely to be solid than a tall plant. There are no doubt some varieties that are naturally liable to be more pithy than others; but still culture and habit of growth has much to do with it.

Though the taste for tall celery has faded away, the old time system of culture still exists in many gardens. But there is no longer any necessity for deep ditches or for wide rows. It is an advantage in many ways to have shallow ditches for celery, as it keeps the roots out of the subsoil, which is generally poor, while the celery is one of those vegetables which likes high and rich food. Ditches a couple of inches or so deep are quite enough.—None are actually necessary, only that a good watering is often a great help, and a shallow ditch helps to collect the water for a thorough soaking. In ordinary field culture, few now have any trenches at all.

As this season until November, and later if the frost keeps off the earthing up of celery as it grows, will be one of the most interesting of garden tasks. Many spoil the whole thing by earthing up too much. When this is the case the plant has difficulty in growing, and especially is this so when the earth gets in about the heart of the plant. A good celery grower is very particular about this point. Often he holds the leaves of the plant close together while the earth is pressed in about the plants by the hands. At this season of the year the plants may be earthed up as often as once a week. It is much better to do it little and often if good celery is desired, as by this frequent work, the leaf blade is not covered, only the stalk, which is all that is needed. The plants need all the green blade to make growth.

TRANSPLANTING LARCH TREES.

There are few trees more beautiful in early spring than the European Larch, and then the immensely rapid growth makes it a very desirable tree to grow for timber. Its wood is sometimes extremely durable; but in many cases it has been found not to last so long, the reason being probably as shown in the *Maryland Farmer* last spring, that the tree sometimes becomes in some degree unhealthy.—However, the timber is always valuable for ordinary farm purposes, and even in its worst condition is better than much which is often used for general purposes.

Independently of its great use as a timber tree, it is a capital wind break to guard other and more tender things from injury, from cold winter storms. The branches are so close and so numerous that a clump of them is almost as effective as if composed of evergreens.

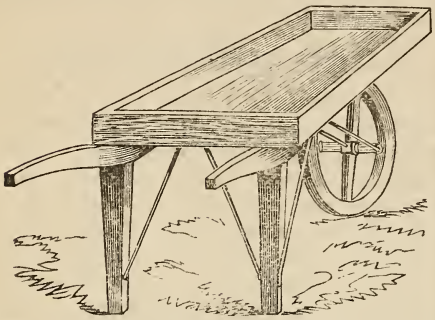
But as we have suggested the ornamental aspect alone renders the Larch a favorite tree to plant about our homes. The flowers which in the end become the cones are of a brilliant rosy red, and may be styled really beautiful, while the soft green leaves are among the earliest to welcome the approach of spring.

This earliness of leafing makes the larch a very bad tree to transplant in spring. Unless moved almost as soon as the frost is out of the ground, the leaves have pushed so far that it recovers only with much difficulty, and the losses by spring planting are probably greater than with any other tree.—But when moved in the fall, it is very rarely that one dies. The writer has had occasion to notice this in many cases the past few years, and is satisfied no tree is so safe under fall planting; many trees are the reverse of this. They do not do as well as when spring planted. There seems no general rule for fall planting. Some things do well and others not; but at any rate there can be no doubt in the case of the Larch. Everybody should have some of them, and to succeed well plant them in the fall, we say.

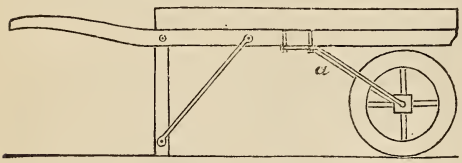
There is nothing more disgraceful than that an old man should have nothing to produce, as a proof that he has lived long, except his years.

A HORTICULTURAL WHEELBARROW.

In almost all establishments where there are flower pots in any quantity, there is more or less hard labor in carrying them about. Usually it is done by carrying boxes, or else by hand barrows requiring the work of two men, which is not often



very convenient to have at hand. Ordinary wheelbarrows do not do at all, as the angle at which they stand when the barrow is in motion upsets and breaks things. We give with this, sketches of a plant barrow, the invention of a gentleman in Holland, which seems to be just the thing for the pur-



pose, and to be a vast improvement on all old-fashioned plans. It would be no doubt useful for many other purposes as well as for pot carrying, as there are always lots of articles about a country home that a spring barrow, with a level bottom when in use, would be just suited to carry.

RIPENING FRUIT.—The *Live Stock Journal* says:—"The removal of the earth about an early pear tree eight weeks before the normal period for ripening, for a space of thirteen to fifteen feet in diameter, leaving only about two inches of earth on the roots, and thus allowing them to be thoroughly warmed by the sun, resulted not only in the ripening of the fruit in the middle of July, but also in its superior juciness and flavor. The removal of earth from the north side of a tree, caused the fruit on that side to ripen several days earlier than that on the south side.

The Apricot is one of the most beautiful and delicious fruits we possess; and its value is greatly enhanced by the season of its ripening—between cherries and peaches.

SPINAGE.

In the Spring, when anything green is something of a luxury, few things come more acceptable to most tastes than a dish of Spinage. In this part of the world it is customary to sow about the middle of September, but as we go south it may be sown all through the present month. A month of good weather before the frost sets in is all that is required, and anywhere wherever that time can safely be calculated on, Spinage may be sown.

It is a vegetable that requires for its best development a very rich soil; as rich indeed as is asked for by any garden crop. The seeds may be sown either broadcast or in rows about fifteen inches apart. In either case it is best to cover very thinly with rye straw after the ground becomes frozen, in order to avoid the frequent thawing which otherwise would draw out and weaken the plants.

Some growers sow radishes among the spinach plants in early spring, but this is only where the ground is very rich, so as to force on the radishes fast, and get them large enough to be drawn off and sold before the spinage has grown much in their way.

WINTER CARE OF TUBEROSES.

These deliciously sweet scented flowers are so popular that almost every one has some tuberose roots, and how to preserve and care for them through the winter is at this season a matter of anxious thought.

Of course every one knows by this time that a root that has once flowered never does so again.—The offsetts around it are to take its place, but these have to make a full season's growth after being taken from the parent bulb, before they will succeed to the flowering condition. These old flowering bulbs are, however, taken up and dried with all the small offsetts on them, and these are taken off and set out by themselves in Spring, to make a separate and good growth for flowering the second year from this time. Bulbs that have been set out in that way this season for flowering next, are to be taken up as soon as the first frost destroys the leaves, and after being dried, put away. They require to be put in a warm place in the winter time; or the little flower buds which are formed in the heart at this season may be killed. This is one of the secrets of the non flowering of some good stout bulbs. The heart or germ has been destroyed, by too cool or too damp treatment.

The Cherry succeeds well on dry soils, and is susceptible of being trained in any form that taste or circumstances may require.

SUN SCALD IN WINTER.

It should not be forgotten that it is sun in winter, rather than frost in winter, that is destructive to vegetation, and often mere shade from the sun is all that is required in order to save a plant from being destroyed by the severity of the weather.—Vegetable growers in the Northern and Middle States have long recognized this fact, and have planted accordingly. In many places it is customary to sow early cabbage and early lettuce in September, getting the plants strong enough to set out before winter. If these plants were set out on the flat land the sun with its power would destroy them; not only by the freezing and thawing, drawing them up, but in some peculiar way that does not seem to be understood, destroying the plant's substance. The cabbage and lettuce grower aforesaid, in order to guard against this, throw the ground up into ridge and furrows with the plough, and set the plants on the *north* side. Here they remain in perfect security all winter. Of course they are aided in this by shelter from wind as well as from sun. Being below the level of the crests of the ridges, the severe winds blow over them. Besides this the ridges are apt to fill up with snow deeper than when the snow falls on level land. It is therefore longer in thawing, and makes the warm snow covering which every cultivator so well appreciates, last much longer than it would under any other circumstances.

These facts may be made useful in many other matters as well as in cabbage or lettuce culture.—It shows that in protecting anything usually hardy, we must take care to keep the subject of protection as much from the sun as possible.

Brampton Stocks.

These old-fashioned flowers—Stockgillies, as our people call them, are among the most beautiful things grown. They will hardly endure our winters as suggested by the writer of the following in an English Magazine, but they are well worth protecting in a cool pit or frame. The other recommendations will suit this latitude:

"Two sowings of these should be made, the first about the middle of May, and the second about the 21st of June. Sow in beds of rich sandy loam in an open situation; and about the end of August, if the weather is moist, or in the beginning of September, transplant them into a border, placing five in a patch; at the same time pot-off a store to be kept in a frame over the winter for planting-out in spring. Use 6-inch pots for the purpose, which should be filled with good loam mixed with a little rotten dung. The more airy the situation is, and the drier the plants are kept in dull weather the better they will succeed. Plants that survive the winter in the borders are always finest, but those kept in pots are well worth the trouble. Seed three or four years old is better and more likely to produce double bloom than that of one year old."

Planting Slips.—The *Gazette des Campagnes* recommends to dip the extremities of the slip in collodion, containing twice as much cotton as the ordinary material used in photography. Let the first coat dry and then dip again. After planting the slip, the development of the roots will take place very promptly. This method is said to be particularly efficacious in woody slips, Geranium, Fuchsia and similar plants.

Orchard and Blue Grass.—A Kentucky correspondent of the *Southern Agriculturist* writes: While I think there is no grass equal to blue grass, yet I like orchard grass in some respects better than blue grass. In the first place you can graze it two weeks earlier in the spring, which is a very decided advantage over blue grass. If you graze properly, its fattening qualities are equal, if not superior, to those of the blue grass. In the next place, if you have a good stand, it affords as much, if not more grazing to the acre, then blue grass.—Again, I have seen blue and orchard grass in the same field or pasture growing side by side; a drouth of some four or five weeks would cause the blue grass to become dry enough to burn, while the orchard grass will be green and luxuriant, comparatively speaking. This is another very great advantage over blue grass.

Proportion of Cream to Milk.—The proportion of cream to milk yielded by cows of the various breeds used in the dairy, was ascertained by experiment, in England, some time since, to be as follows: Brittany cows, 16.27 to 22.00 per cent. of cream; Jerseys, 18.65 to 20.00 per cent.; cross of Jersey and Short-horn, 17.95 to 19.05 per cent.; Short-horn or Durham, 15.32 to 18.56 per cent.; Devon, 14.86 to 17.00 per cent.; and Ayrshire, 13.47 to 14.84 per cent. The variations depended on the feed, which for the lowest yield was grass or hay only, and for the highest was the most abundant food of the richest character that could be produced. As a general thing, however, cream is yielded in larger proportion in our dairies than in those of England. We have been assured by Mr. Crozier, of Northport, L. I., that he has taken one quart of cream from three quarts of milk from one of his Jersey cows.—*Agriculturist.*

Age, that lessons the enjoyment of life, increases our desire of living.

WHAT MAKES THE APPLE ROT?

Our worst enemies are the smallest. All the ravenous beasts in the world, mad dogs included, probably destroy fewer human lives than are destroyed in this city alone by the ravages of those minute but virulent organisms of the genus *micrococus*, to which we owe small pox, diphtheria, and some other malignant diseases. Simularly, the thousand sturdy weeds which annoy the farmer, the caterpillars and grasshoppers which occasionally devour his crops, are relatively innocent and harmless compared with the numerous microscopic pests which rust his grain, rot his potatoes and fruit, and otherwise levy their burdensome taxes without making themselves visible.

Just at this season, not the least interesting of these individually insignificant, collectively enormous, nuisances are the two forms of fungus growth which have most to do with the untimely destruction of fruit—*mucor mucedo* and *pencillium glaucum*.

Our apples decay, not because it is their nature to, as Watts might say, but because it is nature of something else to seize on them for subsistence, as we do, at the same time making of them a *habitat*, as we do not. Kept to themselves, apples and other fruit never rot; they simply lose their juices by evaporation, shrivel, and become dry and hard, or, if kept from drying, remain substantially unchanged, as when securely canned. It is only when invaded by the organisms we have named that they lose color and quality, take on offensive tastes and odors, become covered with white or green mold—in short, develop rottenness and decay.

Formerly this process was thought to be no other than a continuation or exaggeration of the natural process of ripening, the chemical changes which prodnce the odor and flavor of the ripened fruit simply going on to their legitimate though less delightful end. But this theory overlooked the very common and important facts that fruit may rot without ripening and that ripe fruit will not rot if properly protected.

It was not until the microscope was brought to bear on the problem, and the conditions of decay were so convincingly demonstrated, by Davaine, that the real nature of the process became clear. Now we know that, so far from being the complement of growth, the antithesis of life, decay is in reality the taking on of a more rapid though specifically different growth. It is synonymous not with death, but with intensely active life.

In general structure, the numerous microscopic fungi are very much alike, consisting mainly of a network of colorless cells and filaments, called the *mycelium*. This is the vegetative part. There is, besides, a reproductive part, in which is produced the seed or "spore," the structure of which is different in the different genera. In the mucor each reproductive filament bears a globular swelling at its superior extremity, in the interior of which the spores are developed. In the pencillium glaucum the reproductive filament bears a tuft of from four to eight branches, which, in turn, produce upon their extremities a chaplet of small oval spores.—It is called *pencillium* on account of this pencil-like tuft of its sporebearing filaments, and *glaucum* from their bluish green tint. The mold so frequently seen in oranges is produced by this fungus. It is comparatively of slow growth, and the alteration it produces in the properties of the fruit it lives in and upon is not so marked as that caused by the mucor.

When a fruit is invaded by either of these fungi, the vegetative filaments send their branches among and around the fruit cells, and rapidly envelop them in a network of mycelium, absorbing the substance and juice of the fruit, and producing the chemical transformation characteristic of decay.—All this goes on in the interior of the fruit, the fructification of the fungus taking place only on the surface, in contact with the atmosphere. For this reason fruit covered with a firm, fine skin, like the apple, may be a mass of what we call corruption within—in other words, thoroughly decomposed by fungus growth—while no visible mold—the fructifying part—appears on the surface. On the other hand, thin-skinned fruits like the strawberry, which are easily pierced by the reproductive filaments, are often covered with an abundant fructification in a very short time, for the fecundity of these microscopic fungi is sometimes as marvelous as the rapidity of their growth. For example: A single zoospore of the *peronospora infestans*, which causes the potato rot, will envelop the cellular tissue of a potato leaf with mycelium filaments in twelve hours, and fructification will be completed in eighteen hours longer. One square line of the under surface of a leaf, where the fructification naturally takes place, may bear as many as three thousand spores. Each spore supplies half a doxen zoospores, individually capable of originating a new mycelium. From one square line, therefore, there may come, in less than two days, nearly twenty thousand reproductive bodies, and a square inch may yield nearly three millions! No wonder the disease spreads rapidly.

In the case of fruit, decay may be originated in

two ways, and two only: by direct contagion or by wind-wafted spores. With firm-skinned fruit like apples, still another condition is essential, namely, a break in the skin of the fruit to allow the parasite to enter and take possession. In every case of decay in apples, the center of disturbance will be found at a bruise, scratch, or puncture; and unless such a way be opened, the apple may hang until it is dry as leather, or it may lie for weeks in direct contact with rottenness, and remain perfectly sound.

To this it may be objected that the constant presence of the fungus in decay is no proof that it is the cause of that condition, on the contrary, the breaking down of the fruit tissue by violence, and subsequent chemical action owing to access of air, may rather make the growth of the fungus possible by preparing a suitable soil for its development.—The objection has been met in the investigations of Davaine. The evidence that the fungus precedes and causes the changes which we call decay is of the same character as that which established the connection between a vaccine pustule and inoculation by vaccine virus. When sound fruit is inoculated with the spores of pencillium, decay begins at and spreads from the point of inoculation. Apples similarly wounded, but not inoculated, remain the same.—*Scientific American.*

Belgium and her Agricultural Products.

From a Brussel's letter in the *Chicago Tribune*, we extract the following to show what can be done on a small area of territory. The correspondent after discussing the prosperity of the people—Coal and Iron Interests, &c., thus speaks of Belgium and her agricultural achievements:—

Belgium is only a small patch of territory, containing barely 10,400 square miles; but on this little area there is supported in comfort and indepence 5,400,000 souls! Can your readers realize that, on a space not exceeding *one-fifth* that of Illinois, there is concentrated the population of Illinois, Iowa, Wisconsin and Minnesota? But such is the fact.

Not only does Belgium produce sufficient food for her population, including barley for the manufacture of beer, of which large quantities are consumed, but she grows nearly enough sugar-beets to supply her people with what "sweetening" they need; and, in the mountain districts of Ardennes, grapes enough are grown to produce a considerable part of all the wine consumed in Belgium.

Previous to the French occupation, the land was held in vast estates by the nobles and priests, for the benefit of a few pampered families, and, as a consequence, the country was badly tilled by an ignorant, superstitious, and poverty-pinched peasantry. But, as fast as the lands, under the operation of the French laws, became the property of those who farmed them, the system of tillage improved, and the condition of the people changed, from pauperism into independence.

There is now no hereditary land-monopoly and no idle land in Belgium. Not an acre is devoted to deer-parks, pheasantries, or other sporting purposes, for the enjoyment of a luxurious and dissolute aristocracy, while masses of men are starving for bread. As I travel through Belgium, I see swarms of men, women, and children cutting down and gathering a harvest of grain and grass, where the wheat will yield 30 to 40 bushels to the acre, the oats 50 to 75 bushels, and the hay 2½ to 4 tons per acre; while the ensuing product of flax and of root-crops—potatoes and beets — will be beyond American conception of possibilities. The strawberries, red raspberries, and gooseberries brought to market, while not superior in flavor to those sold in Chicago, are twice or thrice as large.

These enormous yields of agricultural and horticultural products are not in consequence of better soil or climate than in America, but are the results of heavy manuring, deep plowing and spading, subsoiling, underdraining when required, irrigation when possible, watchful hoeing and weeding, free use of guano and other fertilizers for top-dressing, and carefel harvesting and storage of crops, whereby nothing is wasted, lost or allowed to rot in the field. This perfect system of tillage never was adopted or thought of until the land became the property of the cultivators of the soil, and the relation of landlord and tenant ceased to exist. The price of land in Belgium ranges from $200 to $1,000 per acre, and a fair average would be $400 to $500; but there is very little offered for sale.

Brussels possesses a park which for extent is unrivaled in Europe, and before long will have no superior in beauty—the great forest of Soignes, which extends from the suburbs south to the edge of the battle-field of Waterloo, a distance of twelve miles, and with a width of four or five miles. This large tract has a great variety of hill and dale surface, with some small streams flowing through it. It is densely crowned with tall forest trees, one or two centuries old. Through this great forest the Belgian Government, to whom it belongs, is constructing broad drive-ways and bridle-paths, and lakes, cascades, bridges, grottoes, and other decorative works. But it is so extensive that it will take generations to complete them all.

LARGEST PEACH ORCHARD IN THE WORLD.—Shellcross, who resides near Middletown, Delaware, says the *Horticulturist*, owns the largest peach orchard in the world. Last year he shipped to New York 125,000 baskets of fruit, and it is estimated that he lost, by being unable to procure labor to pick, about 25,000 baskets more. On several days he loaded from his orchard ten car loads. Mr. Shellcross' orchard reaches along the public road for more than eight miles—generally on either side—and covers an extent of upwards of 1,000 acres; on which is growing more than 100,000 trees. The land on which Mr. Shellcross' trees are planted is worth $150,000.

THE
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N. B. Worthington,	John Carroll Walsh.
Barnes Compton,	John Lee Carroll,
Dr. E. J. Henkle,	Augustus L. Taveau,
John Merryman,	John Feast,
A. M. Halsted,	John Wilkinson,
Ed. L. F. Hardcastle,	John F. Wolfinger,
D. Lawrence,	C. K. Thomas.

ACKNOWLEDGEMENT.—We beg to express our thanks to Mrs. A. L. Black, of Baltimore, for the presentation of the "Premium" basket of Fruit and Flowers, exhibited at the late Horticultural exhibition. It contained about 8 pounds of as many varieties of choice grapes, pears, &c. Also to our old friend of Hampton, Mark C. Taylor for his luscious bunch of Black Hamburghs. Also to John Cook of Baltimore county for his present of a fine collection of native grapes. Also to Wm. McKenzie, for a large bunch of Muscat of Alexandria, of superior flavor, and one monster bunch of Black Hamburghs, these with other presents enabled us to "gorge ourselves with fruit," but with the aid of the office adjuncts we were "masters of the situation."

Maryland State Agricultural and Mechanical Exhibition.

This Society will hold its annual meeting at the *Pimlico Grounds* on the 6th, 7th and 8th of this month; and there is an almost positive certainty that it will be the most successful Fair ever held by the Association. The exertions of the Officers and those members who have had the business in hand have been indefatigable. The grounds have been improved, the track put in fine order, the accommodations for stock improved and increased, while the horse stalls have been so arranged that the public will be able to view those noble animals better and more closely than when they are being exhibited on the course. The facilities of reaching the grounds are now ample and agreeable for any number of persons who may visit the Fair. We learn that some fine stock from other States will be exhibited.

The venerable President, in some very judicious remarks he made at the last meeting of the Society at its rooms in this city, alluded to the importance of the Society to the people of Baltimore and to the merchants especially, hence the propriety of their substantially aiding the Society to sustain itself in offering large premiums and other inducements for a large concourse of exhibitors and visitors. It is to hoped that our merchants, who are noted for their liberality and enterprise will come forward nobly with their contributions, by which they will foster the successful progress of this useful Institution and advance correspondingly their own interests and the prosperity of the City of Baltimore.

The farmers and planters of the State will, it is reasonable to expect, make strenuous efforts to be present as spectators, if not exhibitors, though every man who is a good farmer, has something he can exhibit and should do so for the welfare of the profession to which he belongs and of which he ought to be proud.

Surely we can confidently look forward to an immense assemblage of our farmers and their families at Pimlico, where they will meet and interchange views with intelligent men from our own, and other States; see the finest specimens of cattle, horses and other stock, poultry, machinery and vegetable productions, beside the offerings from the dairy, the apiary, the garden, and beautiful articles of household manufacture, and other evidences of woman's handiwork. They will hear statements of large yields of particular crops and the mode of their cultivation. No man can attend without gaining much useful knowledge; and no man is just to himself or his calling who will not attend this meeting of the farmers, if he can possibly do so.

FIRST EXHIBITION
OF THE
MARYLAND STATE HORTICULTURAL SOCIETY.

The First Grand Annual Exhibition of the Maryland State Horticultural Society has been held, and was pre-eminently successful, indeed far surpassing the expectations and even the hopes of its warmest friends. Instead of not half filling the capacious rooms of Lehmann's Hall, the trouble was where to stow the plants and the crowds of ladies and gentlemen visitors. The large rooms were too small by half, to show the plants to advantage, and to give comfort to the persons who thronged the rooms, particularly at night. All the plants, flowers and fruits, vegetables, &c., which were exhibited were first class, of their respective kinds, while there was a great collection of the choicest and rarest plants to be found in this country.

The exhibition was a brilliant success, and reflected great credit upon the florists, fruit growers and gardeners of our city and State, and called forth hearty commendation upon the energy, indefatigable industry, administrative ability and business tact of the worthy President, Ezra Whitman, Esq., and his co-adjutors and aids, the officers and executive committee. Some of our leading merchants and distinguished men in other pursuits manifested great interest, and expressed high admiration of the fact that in so short a time as six months, a Society could be organized upon so solid a basis, and make a first exhibition equal to any of the kind ever made in this country, excepting those of the old and long time established Society of Boston, which is patronized by the millionares of that refined and rich city.

If this first, hastily gotten up Exhibition has resulted so happily, what may we not expect at its second annual meeting?

It opened the eyes and stopped the mouths of croakers and doubting Thomas's in regard to the enterprize of our people, the floral wealth in and around Baltimore, and the wonderful capacity of Maryland soil to produce the best and finest fruit and vegetables.

This Society will be of the utmost importance and usefulness to the city and State in developing their resources, and building up an immense trade abroad and at home, in flowers and fruits. California sends to our market, peaches, pears, plumbs and grapes in the highest perfection, after a twelve days shaking on the railroad; then why can we not ship our fruits by steamers to Europe in ten or eleven days? This is a great problem already solved, and within the present decade, the fruit trade of Baltimore with Europe will assume gigantic proportions.

We will confine ourselves in this article to such objects as were on exhibition that particularly attracted our attention.

Harford and Baltimore counties bore off the honors in Fruits. Captain Charles H. Snow had a splendid table of fifty-six varieties of pears, seventeen of peaches, and other fruits, most of which was very superior, notwithstanding the unfavorable past season. He took the "Oakford" premium for he largest and best display. John W. Garrett's Hamburgs and Muscat Alexandria, attracted universal admiration from visitors. Mrs. Geo. Brown had a superb lot of foreign grapes, and Mr. Wm. T. Walter's large bunch of White Nice was magnificent. Hovey & Co., Boston, received the premium for the largest variety of Pears, which were very superior. Mr. Jesse Marden, Jr., bore off the palm for the best 12 varieties, 6 of each, which were really superb. The large collection of hardy grapes was a choice one from the Fairview Vineyard of Mr. J. H. Sullivan, Howard county, who is one of, if not the most extensive vine growers in Maryland. His wines are said to be very superior, rivalling the late Mr. Mittnacht's famed Maryland wine. The whole display of fruits were highly creditable, as was also the exhibition of every sort of summer and winter vegetables, among which the white squash or symblins of J. D. Oakford, and the cabbage of J. D. H. McHenry, Esq., were remarkable.

PLANTS AND FLOWERS.

President Whitman presented one of the finest amateur collections in the Hall. His cut flowers and vases were very attractive, and several plants were very rare and beautiful.

The splendid banana or bread tree, the India rubber and the lemon trees, commanded universal attention. John W. Garrett's fine old orange tree, bearing immense fruit, elicited the highest commendation. Much could be learned by the novice, as to pruning, trimming, culture, &c., of such trees, by a little observation in this department. We noticed how severely pruned some of the lemon trees were.

The stove plants, achyranthus, coleus and lycopodiums, and geraniums, of W. T. Walters, were very superior, as were the ferns and caladiums of John W. Garrett.

Mrs. A. L. Black's basket of fruit and flowers received the unqualified admiration of the crowd, it made *our* mouths water, and the eyes of beauty sparkle.

The gladiolus, dahlias, and other cut flowers, and a large collection of evergreens, were highly

creditable to the taste and skill of W. D Brackenridge.

The verbenas of O. Kemp were large and lovely.

James Pentland surpassed every one in roses.—They were really very fine.

The caladiums, ferns and lycopodiums of R. J. Halliday were superior, while his basket of cut flowers and table designs of flowers were exquisite in looks and perfume, and remarkable for a refined taste and great skill in the arrangement.

The Messrs. Massey & Hudson, of Kent county, made a very handsome display of plants and flowers, among which was the *Erianthus Ravennæ*, or Ravenna grass, a native of Italy; it resembles the Pampas grass, differing in the form of the plumes, which are graceful, drooping and feathery like, and from 18 to 20 inches long, have a silky appearance, and are of a silvery white—this specimen is about 15 feet high, and being placed in the centre of the hall and towering above the surrounding plants attracted general attention and admiration.

The greenhouse plants, variegated plants, achyranthus, and stove plants of A. J. Black, did great credit to him and the society.

There was a large and very fine display of Amaryllis and tropical plants from the estate of the late Johns Hopkins, which were exhibited by Mr. Wm. Fowler.

The venerable father florist of Baltimore, John Feast, was in full force with a large collection of rare plants, splendid evergreens, an immense basket of fruits and flowers, tastefully arranged, beautiful hanging baskets, an unique rustic stand, variegated plants, dracænas, &c. Having taken great interest in the success of the Exhibition, he seemed rejuvenated as he beheld his highest hopes more than realized. May he long continue to enjoy the fruits of his long-life labor, and intelligent devotion to his profession.

Now, last though not least, we come to the large and beautiful collection of plants from the amateur greenhouse and garden of the zealous Treasurer, R. W. L. Rasin. Those which struck us most forcibly was a beautiful striped leaved Pine Apple plant, a curious Air plant, and a fine collection of Crotons. These plants are very peculiar in their growth and marking of color. Pandanus, a specimen of Screw pine, Peleas, an Euphorbia, variegated leaved Hydrangea, Maidens hair ferns, variegated Hybiscus, Marantas and Caladiums, all very beautiful and vigorous. We also noticed a very pretty tricolor Saxafraga Fortunii.

The contest for victory in the number, variety and perfection of plants and flowers, was close and well sustained by both, the amateurs and the professional florists. The gardeners of the amateurs, well sustained an enviable reputation, and the public while proud of the professional floral cultivators, were rejoiced to see the taste and zeal exhibited by the wealthy men of the city in devoting a portion of their means to so useful and laudable an object as the encouragement of a love for flowers, and improvement in the quality and quantity of vegetables, all of which tends to the refinement and general comfort and happiness of the whole people of city and state.

We cannot resist the introduction here of a brief but truthful editorial from the Baltimore *American*, which will find response from every visitor to our late exhibition :—

"There are few things that tend more to elevate taste and stimulate cultivation than horticultural and pomological displays, and there have been few exhibitions of this kind in Baltimore in years past superior to the exposition of rare plants, fine fruits, and beautiful flowers, collected through the industry and well-directed enterprise of the Maryland Horticultural Society. Some years ago horticultural exhibitions were much in vogue in Baltimore, and claimed the attention of an excellent class of citizens. Their spirited revival at this time is a a matter for congratulation. Maryland, by reason of its fortunate geographical situation and favorable climate, is naturally a land of fruits and flowers. Baltimore city has environs susceptible of the highest ornamentation ; and Baltimore county, immediately at our doors, possesses many estates where intelligent cultivation has produced rare development. In the present exhibition amateurs rival and surpass professionals in variety and perfection of fruits, flowers, and plants exhibited, though the season is rather late for flowers, and much of the natural beauty of the horticultural department is wanting in this particular for that reason. The late fruits, pears and grapes particularly, present a wealth of production and perfection of development that must be seen to be appreciated, while there is scarcely room in the large hall for the advantageous display of the extensive collection of rare plants, the contributions of numerous conservatories."

The following comprises the names of the several Depositors:

Ezra Whitman, C. Rebele, John Feast, W. T. Walters, A. L. Black, J. H. Sullivan, R. J. Halliday, C. H. Snow, W. D. Brackenridge, Hewes & Co., Boston, M. Perine & Son, J. E. Feast, Miss Morling, F. Silzle, R. W. L. Rasin, J. D. Oakford, Wm. Fowler, gardener for Hopkins' estate, Thos. Fairley, C. W. Hall, gardener at Spring Grove Asylum, Mrs. C. W. Hall, Dr. W. C. Poe, P. J. Lehr, gardener for Henry James, Massey & Hudson, Jas. Pentland, Wm. McKenzie, gardener for J. W. Garrett, Wm. Roberts, J. H. McHenry, John, Sommerfeld, Dr. M. Hammond, John Cook, Samuel Richmond, Dr. S. D. Thompson, Jesse Marden, Jr., Mark C. Taylor, gardener for Mrs. Ridgely, Peoples

Gas Company, Hovey & Co., Boston, A. Hoen, J. H. White, Mrs. Geo. Brown, Chas. Reese, F. Sanderson, C. O. O'Donnell, A. Brackenridge, O. Kemp, C. A. Teipel, R. J. Halliday, W. H. Perot, Gustav Burger, J. Randolph Mordecai, Mrs. T. V. Sutton, R. Sinclair & Co., Jas. Anderson, Jr., Mrs. A. L. Black, W. A. Pritchard, E. Hoffman, Robert A. Deakin & Co., Philadelphia.

The following gentlemen were elected as

OFFICERS FOR 1874-'75.

President—Ezra Whitman.

Vice Presidents, Baltimore City—Wm. T. Walters, Wm. H. Perot and George S. Brown.

Vice Presidents, State at large—Charles H. Snow, John W. Garrett, Edward Wilkins and A. Bowie Davis.

Treasurer—R. W. L. Rasin.

Corresponding Secretary—John Feast.

Recording Secretary—T. C. Dorsey.

Executive Committee—Henry Taylor, Andrew L. Black, John E. Feast, J. Mowton Saunders, August Hoen, W. D. Brackenridge, John D. Oakford, R. J. Halliday and Jas. Pentland.

Vice Presidents of Counties—Dr. Samuel Smith, Allegany; Hon. W. T. Tuck, Anne Arundel; Charles Baker, Baltimore; Hon. Judge Magruder, Calvert; J. W. Kerr, Caroline; Colonel J. K. Longwell, Carroll; J. A. J. Creswell, Cecil; Major W. B. Mathews, Charles; Daniel Henry, Dorchester; Hon. Judge Marshall, Frederick; Patrick Hammel, Garrett; Henry D. Fernandis, Harford; Hon. John Lee Carroll, Howard; W. F. Massey, Kent; H. C. Hallowell, Montgomery; General Samuel Jones, Prince George's; Hon. James T. Earle, Queen Anne's; Hon. Benj. G. Harris, St. Mary's; James U. Dennis, Somerset; Dr. John Miller, Talbot; Dr. Harvey, Washington; Dr. Todd, Wicomico, and Hon. Judge Franklin, Worcester.

LIST OF PREMIUMS.

PLANTS, &c.

PROFESSIONAL PREMIUMS.

Best 12 Greenhouse and Stove Plants, A. L. Black, $12
2d " do do John Feast, 6
Best Single specimen—not variegated, Do. 5
2d " Do do A. L. Black, 3
Best 6 Variegated Plants, not offered in any other collection, A. L. Black, 6
2d " Do do Massey & Hudson, 3
Best single Specimen Variegated Plant, J. Feast, 5
2d " Do do R. J. Halliday, 3
Best 12 variet. Coleus and Acryanthus, A. L. Black, 6
2d " Do do J. Pentland, 3
Best 12 varieties Caladiums, R. J. Halliday, 6
2d " Do J. Pentland, 3
Best 12 varieties Ferns, R. J. Halliday, 6
2d " Do Thos. Fairley, 3
Best 6 varieties Lycopodiums, R. J. Halliday, 4
2d " Do John Feast, 2
Best 6 varieties Dracænas, John Feast, 6
2d " Do A. L. Black, 3
Best 6 varieties Palms, A. L. Black, 6
2d " Do John Feast, 3
Best 12 Succulents, John Feast, 6
2d " Do W. D. Brackenridge, 3
For best seedling Stove or Greenhouse Plant the committee make Honorable Mention of John Feast and A. L. Black.
Best New Plant, not offered in any other collection, John Feast, 10
2d " Do do A. L. Black, 5
Best pair Hanging Baskets, John Feast, 4
" Single do Massey & Hudson, 2
" collection of Hardy and Tender Evergreens, W. D. Brackenridge, 8
2d " Do do John Feast, 5
Best Rustic Stand, John Feast, 5
" Basket Fruit and Flowers, Do 8

AMATEUR PREMIUMS.

Best 12 Greenhouse & Stove Plants, W. T. Walters, 6
2d " Do do R. W. L. Rasin, 3
Best Single Plant—not variegated, J. W. Garrett, 5
2d " Do do Ezra Whitman, 3
Best 3 variegated Plants, not offered in any other collection, R. W. L. Rasin, 3
2d " Do do W. T. Walters, 1.50
Best single specimen Variegated Plant, do 5
2d Do do R. W. L. Rasin. 3
Best 6 var. Coleus and Acryanthus, W. T. Walters, 3
2d " Do do R. W. L. Rasin, 1.50
Best 6 varieties Caladiums, J. W. Garrett, 3
2 " Do Ezra Whitman, 1.50
Best 6 varieties Ferns, Wm. T. Walters, 3
2d " Do C. W. Hall, 1.50
Best 3 varieties Lycopodiums, Wm. T. Walters, 2
" 3 do Dracænas, Do 3
2d " do R. W. L. Rasin, 1.50
Best 3 varieties Palms, Do 3
" 6 Succulents, Ezra Whitman, 3
Best Wardian Case, C. W. Hall, 5
" 6 varieties of Geraniums, W. T. Walters, 2.50
" 3 do varieg. do Do 2.50
" 3 do double do Do 2.50
" Collection Ornamental Vases, E Whitman, 5
Best Rustic Stand, John Sommerfeld, 5
2d do Do 3
The Committee recommend a Special premium of $10 each the following gentlemen, for Large and valuable collections of Plants exhibited:— John Feast, Ezra Whitman, John W. Garrett and Thos. Fairley.

Committee—Charles Reese, Robert Scott, George W. Saunders, Wm. Fowler, C. A. Oakford.

FLOWERS.

PROFESSIONAL PREMIUMS.

Best 12 var. Gladiolus, cut or in pots, Brackenridge, 4
2d " do do R. J. Halliday, 2
Best 12 varieties Dahlias, W. D. Brackenridge, 4
2d " do O. Kemp, 2
Best 12 varieties Verbenas, O. Kemp, 3
2d " do James Pentland, 2
Best 12 varieties of Roses, Do 3
2d " do Do 2
Best Hand Bouquet, James Anderson, Jr. 3
2d do A. Brackenride, 2
Best Bride Bouquet, James Anderson, Jr. 3
2d do John E. Feast, 2
Best basket of Cut Flowers, R. J. Halliday, 5
" Table Design, Do 6
2d " do John E. Feast, 4
Table Design, recommended for a prize, J. Pentland.
Best collection of Cut Flowers, W. D. Brackenridge, 6
2d do do J. H. White, 3

AMATEUR PREMIUMS.

Best 6 var. Gladiolus, cut or in pots, W. T. Walters, 2
" 6 Dahlias, A. J. Pritchard, 2
2d " do A. Hoen, 1
Best collection Cut Flowers, Ezra Whitman, 3
2d " do do A. J. Pritchard, 1.50
Best Hand Bouquet, E. Hoffman, 3
Best Table Design, Wm. H. Perot, 6
Best basket Fruits and Flowers, Mrs. A. L. Black, 8
Best Collection of Cut Flowers, raised from seeds bought of James Vick, Rochester, N. Y., "Vick Premium," A. J. Pritchard, $20

Committee—W. H. Perot, R. W. L. Rasin, J. Wilkinson.

FRUITS.

Professional and Amateur Premiums.

PEARS.

Best 12 varieties 6, specimens, Jesse Marden, Jr. 10
2d " do do Wm. Fowler, 5
Best and largest collection, Hovey & Co. 10

Best Pears, a premium to Massey & Hudson, 15
These pears are highly recommended for extra size and quality.
Best Dish of Pears, W. T. Walters, 3
Best Collection of Pears, by the exhibitor, "Oakford prize," C. H. Snow, 25
2d " and largest variety, do 5

PEACHES.

Best 12 varieties, 6 specimens each, C. H. Snow, 10

GRAPES.

Best 6 varieties, "Foreign," 2 bunches each, Mrs. Geo. Brown, 6
2d " do do do J. W. Garrett, 3
Best Single Bunch do Mrs Geo. Brown, 3
" 3 varieties, Native, 2 bunches each, J. Cook, 3
2d do do do F. Sanderson, 2
Best General Collection Native, J. H. Sullivan, 5
Highly Commended, 4 varieties, "Foreign," C. O. O'Donnell.
Highly Commended, largest Single bunch, White Nice, very large and well grown, W. T. Walters.
Best Dish of Figs, John W. Garrett, 2

Committee.—Ernest Hoen, W. F. Massey, Wm. D. Brackenridge.

VEGETABLES.

Best Table Beet, 12 specimens, S. Richmond, 2
2d do do Henry James, 1
Best Carrots, 12 specimens, Mrs. Geo. Brown, 2
2d do do J. H. McHenry, 1
Best Corn, garden, 12 spec. Dr. I. D. Thompson, 2
" Pop Corn, complimentary notice, do
" Lima Beans, 2 quarts, do 1
Lima Beans, lots of F. J. Lehr, J H. McHenry, and Samuel Richmond, very fine, and a difficult duty to decide between them.
Best Parsnips, 12 specimens, Mrs. Geo. Brown, 2
" Salsify, do Samuel Richmond, 1
" Squash, white bush, 6 spe. J D. Oakford, 2
" Tomatoes, 1 peck, Henry James, 2
2d do do Trophy, J. D Oakford, 1
do Hathaway, new variety, early, highly Commended, Dr. I. D. Thompson.
Best Okra, 1 dish, Samuel Richmond, 1
" Cabbage, 6 head, J. H. McHenry, 2
2d do do Savoy, Do 1
Best Onions, 1 peck, Mrs. Geo. Brown, 2
" Cucumbers, 12 specimens, S. Richmond, 2
Mixed Peppers, highly commended, Dr. Thompson.
Lot Silver-skinned Onion Sets, exhibited by Sam'l Richmond and Dr. Thompson, very fine and highly commended.
Lot of Tomatoes exhibited by F. Silzle, J. D. Oakford, Massey & Hudson, very fine and worthy of Special Mention.
Lot of Wax and Snap Beans, very meritorious, exhibited by J. D. Oakford.
Mangel Wurtzel, special and fine, J. D. Oakford.
Best Display Horticultural Tools, R. Sinclair & Co. 5
Best and largest display of Vegetables—one being the largest and the other the best—the committee recommend the premiums be divided between J. H. McHenry and Samuel Richmond.

Committee—E. B. Tyler, Jesse Marden, Jr., John H. White, J. H. Brumwell and R Halliday.

DISCRETIONARY PREMIUMS.

Best Flower Pots, M. Perine & Son, 2
2d do Linton & Co. 1
Best Propagating Pans, M. Perine & Son, 2
" Hanging Baskets & Rustic Logs, Hewes & Co. 2
2d do do M. Perine & Son, 1
Best Ornamental Flower Vase, Do. 2
" Fernery Vase, Hewes & Co. 2
" Flower Bracket, Do 1
" Bird boxes, M. Perine & Son, 1
" Collection Canned Fruit, highly commended, Mrs. C. W. Hall, 2
For the best display of case of Garden Syringes, Robert T. Deaken & Co., Phila. 5

Committee—John D. Oakford, Henry Taylor, Aug. Hoen.

We make room for the following review from an amateur friend, who was a constant attendant during the entire exhibition :—

"Amateur" on the Horticultural Exhibition.

The grand success of the First Annual Exhibition of the Maryland Horticultural Society was exceedingly gratifying to all true friends of Horticulture, and reflected the highest credit upon the officers of the Association, who in so brief a period since its organization, brought forth such evidence of its progress and usefulness. It is scarcely six months since the Society was incorporated, yet there has been established regular monthly meetings, all of which have been of a highly instructive nature, and where subjects partaining to Horticulture were discussed by its members, with an intelligence that would do credit to a much older Society.

Those that are not acquainted with the progress that has been made in Horticulture—in Maryland, of late years—would have been astonished at the display at Lehmann's Hall, on 9th instant. Seldom indeed, has such a treat been offered to the citizens of Baltimore. In the main hall there were arranged five tables up the centre, and one around it, all loaded with the choicest of Flora's treasures.

Amongst the professional exhibitors, we noticed the names of most of the leading Florists and Nurserymen around Baltimore.

Mr. John Feast, the well known "Veteran Florist," showed a fine collection of plants—amongst them was splendid specimens of Beaucarnia recurvata, Maranta Tubispatha, Anthurum magnificum, and do. Regale, Philodendron Pertusum, Musa Zebrina, Alocasias, Agaves, &c., also a large and varied collection of hardy and tender evergreens in pots, many of them quite rare.

Mr. Andrew L. Black, was one of the most successful competitors ; for variety of form, his collection was surpassed by none. His Tree Ferns and Palms are splendid specimens, such as Cyathea, Medullaris, Alsophela, Australis, Cycus revoluta, Seaforthia elegans, &c., but it was in his variegated and new plants that he showed to the best advantage, such as Yucca quadricolor, Pandanus Javanicus argenteus, Dracona termenalis picta, and do. Guelfoyleii, Pandanus Veitchii, Eriochnema marmorata, Spherognea Latifolia, the last three are new, and no doubt will, in time, take a front rank among foliaged plants.

Mr. R. J. Halliday showed a large collection of Caladiums, some of them were of rare merit, also a magnificent specimen of Pandanus Javanicum variegata. His Dracænas, Lycopodiums and Ferns, were also fine, especially the Alsophila excelsa, Lomaria Gibbii, and Hypolepis repens.

Mr. James Pentland's Caladiums were well grown plants, he also showed a large assortment of Coleus.

In the evergreen class, Wm. D. Brackenridge took the lead, his collection was large and well assorted. There were some fine specimens of Junipers, Yews, Cypresses, Pines, Arbor vitæs, Thuyopsis, Retinosporas, Araucaias, Hollies, Rhododendrons, &c.

Massey & Hudson, Chestertown, Maryland, exhibited fine specimens of Agaves, Sedums, Variegated Hydrangea, and some well grown spikes of Erianthus Ravennæ.

In the amateur class, W. T. Walters, Esq., was the most extensive exhibitor, his Lycopodiums was particularly fine, and artistically arranged in rustic pots, which had a charming effect. In his collection there were splendid specimens of the Elkhorn Fern, Pateris argyrea, and do. Hastata, Blechnum Brasiliensis, Polypodium aureum, Maranta Zebrina, Passiflora trifasciata, Hydrangea variegata, Clerodendron Balfourii, and a fine assortment of Coleus. This display was under the supervision of Alexander Fraser, Gardener to Mr. Walters.

In R. W. L. Rasin, Esq., collection, there was some very rare and beautiful plants, which were very much and justly admired. The variegated Pine Apple, Pandanus Javanicum argenteus, and do. Utilus, were gems. He also had fine plants of Diffenbachia picta, and do. Beaumenii, Phormium tenax variegata, Croton interruptum, and do. Veitchii.

Mr. Wm. Fowler, Gardener to the Hopkins' Estate, exhibited some fine Amaryllis, in bloom, and a splendid specimen of Bonapartea Juncea, and a Tea Plant, which attracted a good deal of attention, especially from the lady visitors.

Wm. McKenzie, Gardener to John H. Garrett, Esq., showed fine plants of Peteris Tricolor, and do. Argynea, Strelitzea Necolii, Lycaste Skinnerii, in bloom, also two fine specimens Lemon and Orange trees, in fruit.

Mr. M. C. Taylor, Gardener to Mrs. Ridgely, Hampton, had on exhibition some well grown plants of Begonia Rex, Cissus discolor, Coleus, setting sun.

Mr. C. W. Hall, Gardener Spring Grove Asylum, showed a beautiful assortment of exotic Ferns, many of them were of rare merit, and gave evidence of good culture.

E. Whitman, Esq., exhibited a fine selection of Coleus, Caladiums, Agaves, Asters, also a fine specimen Lemon tree, in fruit. His Garden Vases, filled with growing plants, were very neatly arranged.

J. Howard McHenry, Esq., showed a fine Banana tree, also some well grown Dracænas.

Mr. Thomas Fairley staged some well grown Ferns, amongst them were a fine plant of Adeantum Farleyense, Cyathea Medullaris.

In the foreign grape class, there were some superior and delicious bunches.

John W. Garrett's Hamburgs and Muscat of Alexandria, were particularly fine, and it was the wonder of many, why they did not get the first prize, at least for the best single bunch. Mrs. G. Brown's collection was neatly arranged, and amongst them was a well grown bunch of Black Prince. Mrs. Chas. Ridgely, Hampton, had a fine specimen of Golden Hamburg, a variety seldom seen as well grown, hereabouts. A bunch of White Nice, from the vinery of W. T. Walters, Esq., was a handsome specimen of its kind, and reflected credit upon his gardener, Alex. Fraser, who is well known to be a successful cultivator of the Grape.

In Native Grapes, J. H. Sullivan, Esq., of Fairview, Howard county, showed a fine collection, including some specimens of Roger's Hybrids, Concords, Delaware, &c. Mr. John Cook and Mr. F. Sanderson, had some good specimens in this class. Captain C. H. Snow, of Harford county, outstriped all other competitors in Pears, with a splendid collection of 56 varieties—the Duchess were superb. His Peaches were also fine. Hovey & Co., Boston, had a large and well assorted collection of 55 varieties, some of them of rare merit. Mr. Wm. Fowler, Mr. Jesse Marden, Jr., and Massey & Hudson, also exhibited some fine specimens of Pears; in fact it was admitted by many—who were competent to judge—that this class was better represented than any of the fruits, and consequently was deservedly admired. The baskets of fruits and flowers, shown by Mrs. A. L. Black and Mr. John Feast, were artistically arranged, and attracted the attention of many visitors; the encomiums passed upon them must have been gratifying to the exhibitors. The cut flower department was rather poorly represented, but that is not to be wondered at, considering the dryness of the past summer. With the exception of Dahlias, shown by Mr. August Hoen and Mr. Brackenridge; Verbenas by Mr. O. Kemp, Mr. John White and Mr. James Pentland; Gladiolous by Mr. Brackenridge, and a very tastefully arranged stand of flowers by the President, E. Whitman, Esq., there was nothing else worthy of mention.

Vegetables was good, though nothing extra as to quantity. J. Howard McHenry, Esq., exhibited some good Flat Dutch Cabbage, Drumhead, Savoy and Lima Beans. Mr. Samuel Richmond's collection was large and fine, amongst them were Beets, Salsify, Cucumbers, &c.

Taking everything into consideration, eulogium may fairly be passed upon all that was exhibited—where all was so excellent it is difficult, if not invidious, to particularize; but we must say that the exhibition was in all the departments highly praiseworthy, and if the formation of an elegant, tasteful, and varied display of well-grown Plants, Fruits and Flowers, and the very apparent satisfaction of visitors, be any criterion, then was the exhibition as completely successful as the most sanguine could wish it to be.

AMATEUR.

THE SECRETARY OF THE PENNSYLVANIA HORTICULTURAL SOCIETY.—In our August number we referred to Mr. Thos. Meehan, as the Secretary of the Pennsylvania Horticulture Society. Mr. M. informs us that he is the Corresponding Secretary. The Recording Secretary on whom most of the hard work falls, and who has done much more than he has towards the present high reputation of that Society is A. W. Harrison, of Philadelphia. He adds that the President, W. L. Schæffer, and Mr. J. E. Mitchell, with Dr. Houghton, do a great deal of the voluntary work in organizing and executing things.

PRESENTED.—T. C. Dorsey, Secretary of the Horticultural Society, acknowledges the following presents from depositors at the late exhibition :—From Alex. Fraser an elegant bunch of White Nice Grapes, and a dish of matchless Bartlett Pears. From Andrew L. Black a beautiful table ornament of flowers. From John Cook, a fine collection of Native Grapes. From John Feast a large and beautiful Basket of Fruit and Flowers.

FREDERICK COUNTY FAIR.—The exhibitions of the Frederick County Agricultural Society at Frederick, Maryland, have been for a number of years so uniformly successful and interesting, as to render their annual recurrence occasions of more than ordinary enjoyment to the public, and a visit to the pleasant little city of Frederick, and its beautiful surroundings, with the additional attraction of the great Fair is an event of pleasant anticipation to thousands. The next Fair begins Tuesday, October 13th, and continues four days. The prospects are said to be unusually encouraging for a fine exhibition. The Railroads leading to Frederick will offer liberal arrangements for excursion tickets and freight for exhibition. Address Charles D. Keefer, Secretary, Frederick, Md.

DEATH OF JOHN STANTON GOULD.—This eminent agriculturist died suddenly, of congestion of the lung at Hudson, N. Y., on the 8th of August last, in his 63d year. No man connected with agriculture, in this country, was more respected and honored for his earnest and able efforts to advance its interests.

In our next we will published "An Essay on Puccinia, or Blight in Grain," read before a recent meeting of the Academy of Science by John Feast, Florist, of this city, Corresponding Secretary of the Maryland Horticultural Society.

LARGE GRAPES.—A bunch of Black Hamburg grapes, exhibited at Manchester, England, weighed 12 pounds 4 ounces.

How to Make Oil Lamps Safe.

The numerous frightful accidents occurring of late from the use of oil lamps, induces us to publish the following from the *Tribune*. Let town and country people read and heed :—"There are a great many accidents happening every day from the use of kerosene. I will tell you a method by which they can be to a great extent prevented, and I hope you will publish it for the benefit of poor people, who are obliged to buy cheap oils. If the body of the lamp is filled with cotton, such as jewelers use to lay their articles in, after it is stuffed lightly, it will still receive one-half the quantity of oil which it would hold if the cotton were not put in. If any accident happens, the oil cannot spill or flow about, but is, as it were "sopped up" in the cotton, which burns like a faggot, but all in one place.

"The other night, as the gas was execrable as it generally is, I lighted a large glass kerosene lamp, which had a glass globe about 5 inches in diameter, holding over a pint of oil. This I filled with cotton, and found I could pour in nearly a pint of oil before it became too wet. As I opened a window, a cold gust of air came in, and striking the hot surface of the glass—at least I supposed so—the globe suddenly cracked and fell apart, and a mass of flame about as big as your head jumped out upon the floor and flamed out about a yard. I immediately covered it with the slop bucket as an extinguisher, and with the help of the water-pitcher and some wet towels, had it out in five minutes with no damage done. If the lamp had not had cotton in it, I should not be writing to you now, unless you can receive communications from the other world."

SECOND CROP OF FRUIT.—Mr. Jacob Pennypacker, North Coventry Chester, county, Pa.—says the Pottstown *Ledger*, of September 16th—in passing through his fields a few days ago, found a raspberry bush well loaded with green berries. He cut off a number of branches, brought them home, and inserted them in a vessel containing earth.—The raspberries flourished and are now ripening as well as if left upon the bushes. We never before heard of so many varieties of fruit and berries bearing second crops as we have this season. There are at least three cherry trees within a radius of three miles from this borough now loaded with cherries.

BEES.—As soon as frost comes, unite colonies that are not strong enough to winter alone. Deprive one of them of their queen a few days before uniting, and there will be no tronble.

THE DAIRY.

LONG TABLE TALK ON DAIRY MATTERS.

TALK NO. IX.

A DAIRY HOUSE.

Wherever any considerable outlay is to be made for any purpose, it is a good plan to personally inspect the result of other peoples outlay in the same line: if any of our readers intend to build an elaborate dairy house with a churning room and wash room separate from the milk room, or with facilities for power churning, or with a connection with an ice house, we would advise them to visit similar buildings, and examine the house invented by John Wilkinson, a model of which is now at the *Maryland Farmer* office, and which is a combination of ice house and dairy so arranged, that the temperature of the dairy is under the control of the operator at all times, a desirable feature: we may give a description of this plan at some future time; our object now is to describe one or two plain, Maryland spring water dairies, with a few suggestions, which may be of benefit to our readers.

Two plans suggest themselves: one is to dig down below the frost line for the foundation, and lay the inside stones, sandstone or limestone in cement, as one side of the water channel: carry up the wall 2, 3 or 4 feet, as may be desired, and then build the house as usual by putting the sill on the wall and building a frame over it: if this course is pursued, the inside should be lathed and plastered, the floor overhead laid with tongue and groove boards and space made water proof, and filled with saw dust: the object of the lathing, plastering, ceiling and fillling, is to prevent the operation of the external temperature upon the milk and cream: in summer the temperature of the atmosphere sometimes rises to 130° F.: this temperature, if not modified, would cause a change in the milk in a few hours, sufficient to prevent the cream from rising: when milk thickens in souring the light particles of cream no longer rise through the obstructing particles: the temperature of a dairy should not vary much from 58° or 60° summer and winter. In the winter, the external temperature sometimes falls to 10° below zero F.; in this case condensation and freezing occur where the temperature is not modified, and this also prevents the rising of the cream globules: the door also should be made tight, or make two doors; one to open on the inside of the frame and the other on the outside; the space between will be a good non-conducting air chamber, which may be made to exclude external air by tacking strips of cloth around the doors: the fresh air necessary for the purification of milk and for sweet butter, may be admitted through the side windows, or ventilators, in quantities to suit the temperature desired within.

In a house of this kind the end plates should project four or five feet, to make a covered churning and working space off the damp floor of the dairy.

Another plan is to build the house of stone: let the walls, 18 inches thick, go up ten feet from the foundation, leaving small window holes in each end: if the roof, boxing and ceiling are perfectly tight, no filling of saw dust is necessary, but it is very difficult to so construct a house: the projection of four or five feet will be found very useful to hold a table for the milk vessels, and for working and printing butter in cool weather, where a separate room is not built for these purposes.

WATER CHANNEL AND SIZE OF BUILDING.

In regard to the channel, we will make some calculations, and these will determine the size of the house.

The size of the channel and house will depend upon the milk vessels: we have come to the conclusion, after much experience and observation, that for *our* use the ordinary two gallon jar is the best: these are thirteen inches high and eight inches across: we will make the calculation on this basis: if others prefer vessels of different dimensions, they can estimate the amount of room they would require in a similar way.

A house ten feet square, allowing eighteen inches for each wall, would give us seven feet for length of channel on the inside, on two sides: if the trough or channel is 25 inches wide—to allow 3 jars abreast—there would be left but three feet for each of the other two sides: this gives us twenty feet by twenty-five inches as capacity of channel or trough. This would admit 75 two gallon jars, or 150 gallons of milk.

Fifteen cows giving a gallon and a half of milk at a mess, would give forty-five gallons a day: a trough of the above capacity would hold three days supply: this is long enough for milk to remain unskimmed even in cold weather: with proper temperature, 48 hours is usually sufficient, although we have known cream to rise between the 48th and 72d hour: the dry island in the center of the dairy on the above plan would be not quite three feet square, a very small space to work on, but sufficient with a dry, cool place on the outside for the performance of part of the dairy work: if a room larger than four or five feet projection is preferred it can be built more easily and cheaply than a large dairy.

A very pretty variation to the common double pitch house roof is sometimes made in dairy structures, by building a high—four cornered roof—with a neatly painted ventilator on top.

TROUGHS FOR MILK.

Several plans are in operation.

First—A half-inch cast iron trough may be used, which will last from one generation to another, but are very expensive.

Second—Bricks laid in hydraulic cement on the bottom and sides are much used, but are not durable; the bricks get loose and work out of place, which gives great trouble.

Third—The outside wall is cemented for one side of the trough, and a cemented wall is built for the other, which holds up also the central dry island, but these are not considered lasting by those who have made and used them, although doing good service for a time.

Fourth—A box trough of yellow pine is clean, easily and cheaply made and cleaned out, tight, durable, easily filled in its place, and easily removed, should alteration in trough, channel or wall be necessary.

We have been looking into this question, in view of the necessity of immediate building on our own farm, and have concluded to build of stone complete, and insert the wooden troughs for holding the milk.

The question of deep or shallow setting of milk here comes in, and we refer those desirous to look up the matter to a previous number of the *Farmer*: by our plan, however, either mode of setting the milk may be followed. *

A GOOD HEIFER—335 POUNDS OF BUTTER.—Mrs. N. Vosseller, of North Buffalo, N. Y., reports to us a small red heifer that came in the 8th of November, 1872, being only 22 months old, and from the 15th of that month to the 15th of October, 1873, has made 335 pounds of butter, or a pound per day, average, and is making that now. Her milk was weighed several days in August, and found to be 23 pounds per day, and if we may suppose this heifer to average that amount through the year, she will have given 8,395 pounds of milk at the end of the year. She has been fed well, of course; cows don't give milk without feed.—*Exchange.*

REMEDY FOR THE PEACH WORM.—Mr. P. Stewart, of the New Lebanon, N. Y., Shakers, communicates to the American Institute Farmer's Club a mode of ridding peach trees of the borer, consisting of a mixture of one peck unleached ashes, a quart pure salts, one pint flour of sulphur, four quarts bone meal, and two quarts of fine sea gravel. Of this mixture he puts about a pint close about the parts affected by the worm.

For the Maryland Farmer.

THE DAIRY, AND THE DAIRY INTEREST.

Having made the dairy and the dairy interest a specialty of late, I have decided, with your permission, to give the readers of the *Farmer* the result of my labors.

I found, by data given me by the statistician of the Agricultural Department, that the value of the annual dairy product of this country had reached the enormous sum of $360,000,000; and knowing as I do, how very injudiciously the dairy business is generally conducted, and being satisfied that the product may readily be doubled, even in the use of the same number of cows now kept, I concluded that I could not give you a communication on any subject that would be more profitable and interesting than one on this. It is now forty one years since I made plans and specifications for my—first dairy room. It was a dry vault, and was as good as many that have been constructed during the past few years, yet it was very defective. *It was then, and ever will be, utterly impossible to ventilate by the ordinary means, a dry vault, or spring house, the floor of which is lower than the surface of the ground surrounding the building.*

I will explain why it is impossible, and what the consequences of a want of ventilation are, and will then explain the improvements that I have made in the dairy room construction, and how I have effectually overcome what was impossible under the old system. When any portion of a dairy room is lower than the surrounding ground, impure gases, heavier than the out of door atmosphere, are liable to settle into, and lie near the floor of the apartment, where the milk, cream and butter are usually kept. Milk is inclined to give off animal odors, and taints contained in it, whilst it is cooling, and the more gradually it is cooled, the greater the degree to which it is capable of purifying itself. Impurities and odors thus eliminated, are rapidly absorbed by the air of the apartment, and it being cooler and heavier than the air around the building, it cannot be removed in an upward direction, by the influence of natural law, and there being no means of escape for it in a downward one, it lies there stagnant.

Although it may become cooled, after the animal heat has been given off by the milk, yet the daily recurring setting of the warm milk, as often recharges it, as long as the air has power to absorb gases and odors. Finally, instead of the air of the apartment being longer a means of purifying the milk, it has become poisoned and tainted, and capable of imparting its pernicious qualities to the milk and its products, which, even at a low tem-

perature, have powerful absorbing properties.—This adverse state of things is soon obtained in a dairy room in which milk, in considerable quantity, is daily deposited, before the animal heat has been extracted from it; which is nearly the universal practice, even with persons claiming a reputation as butter makers.

It must be clear to the reader that a good quality of butter, and an article that may be preserved any considerable length of time, cannot possibly be made under such circumstances, for the elements of destruction abound, instead of those of preservation.

Under a full conviction of the existence of what I have endeavored plainly to describe, and knowing well how desirable it was, for both producer and consumer of butter, to remove, if possible, these very serious and rigorous difficulties in the way of making good butter, I resolved with determined purpose to endeavour to devise an effective and economical mode of ventilating and cooling the dairy room, to the proper degree, and of maintaining automatically, these very desirable conditions in it. I well knew that it was impracticable to employ operatives who could be relied on to regulate and work a cooling and ventilating arrangement, which required intelligence, judgement or skill. I also resolved to endeavour to invent a substitute for the very inconvenient and unsatisfactory spring house, so universally used in the manufacture of butter.

The spring house was, if possible, more objectionable than the dry vault—for these reasons, viz: the springs usually flow at the base of hills and slopes, and if the dairy room or spring house is erected over, or below the spring, it must be in a low site, in a ravine or valley, where impure gases, which produce malaria, are generated, and where they accumulate, and they being more dense than pure, hill summit atmosphere, they settle into the lowest places and there remain. As the spring house is usually constructed, the floor or sinks for the milk, are usually lower than the surrounding grade, so, of course, it soon fills with noxious gases, which it retains indefinitely.

In addition to this, the air of the spring house is generally very damp and unwholesome, and as I have stated, can only be ventilated by providing an escape for the cool, impure air, in a downward direction.

In the use of such downward ventilation, which is often practicable, the vacuum produced could be supplied, in the absence of my new arrangement, from no other source, than from the external atmosphere, which, at its high, summer temperature, would be fatal in its influence on the dairy room.

The substitute for the dry vault and the spring house.

I experimented until I invented a thoroughly effectual, convenient and practicable combination of the Ice House and Dairy Room, so arranged that both the cooling and the ventilating apparatus should operate automatically and simultaneously. When I had reached the goal, I secured my invention by letters patent in May last, and have since been building my patent dairy.

The Ice House.

It is now generally conceded that the rural home, and the farmery are incomplete without an *ice house*, conveniently located. It was formerly looked upon as an appurtenance of the luxurious home only, but latterly, as an indispensable essential in a suit of buildings for the suburban residence, or a farm.

Many have been deterred from building the ice house, on account of the many failures, and the general ignorance of the true principles of their construction; and by so many having been constructed by groveling pretenders; a numerous class, who think, that if all men are not born architects, they certainly were; and if they are a seventh son, they were born doctors as well. It is fortunate for the masses however that a few proprietors have learned, that it is as judicious and economical to employ an architect to design a building of any description, as it is to avail of the best legal counsel, when legal knowledge is required. Ignorance of the proper and economical construction of the *ice pond*, has also deprived many a worthy family of ice for a lifetime. I have constructed a number of ice ponds, that have given an annual supply of good ice for years, where it was considered utterly impossible to make a crop of ice. I can call to mind a number of ice houses which have been located by the quack architect, from ten rods to a third of a mile from the house. I will not waste space by commenting on such an arrangement.

The proper site for the ice house and dairy room.

These structures, to be thoroughly useful and convenient, should be so located that they may be entered from the culinary apartments of the farm house, of which they are properly as much a part of, as are the kitchen pantry and the fuel room.

I would as soon think of placing the wardrobe for the proprietor's chamber, or the family water closet, in the cellar, or cock-loft, as I would of locating the *dairy room* and *ice house* remote from the farm house, their value depends in a great degree on the convenience of their location.

I know of no investment in rural buildings, that will give a better return than that expended in supplying a proper Ice House, Dairy Room and Fruit Room. They are each equally essential to the comfort and health of a family and the three are inseparable economic structures, as the last two are directly dependent on the spaciousness and perfection of the former.

As in many other matters pertaining to a high order of civilized life, the popular mind has to be educated and elevated, before the great advantages of these structures are fully appreciated. All admit the desirableness of a constant supply of *pure milk, aromatic sweet cream and butter*, and luscious, *ripe fruit* every day in the year; yet but few know that all are within their reach. The masses look upon them as very expensive luxuries, obtainable, by the very wealthy only, whilst they may be supplied and enjoyed by a large majority of farmers, at a tithe of the cost of the *needless fences*, which they make and maintain.

Gilt edged butter, and good fruit, properly ripened, few farmer's families in this country have ever seen.

I am aware that many will consider this a broad assertion, and not a few will no doubt consider it untrue.

I admit that it is strange; but nevertheless, it is as true as it is strange, and will, I am satisfied, long continue to be so. No class is so slow in seeing their true condition as farmers, or so slow in ailing themselves of their rights.

It is a well established fact that milk is susceptible of being tainted in the blood of the cow, and to satisfy the most skeptical that it is so, after it has been drawn from the cow, they only need allow their olfactories one salute from the odor of an unwashed milk can, on its way back to be filled with "*pure country milk.*"

Purity and cleanliness must characterize everything that pertains to the production and manipulation of milk and its products, or a good quality cannot be produced and preserved. The highest degree of chemical knowledge is inadequate to the task of removing taint once established in milk, hence, our only safety is in prevention.

To do this, we must commence with the animal, the condition of the cow must be strictly normal, the air she breaths must be pure; the food and water, not only sweet and pure, but the former must consist of due proportions of highly, and moderately nutritious substances, all known to be congenial to ruminating mammalia. Undue and unnatural excitement of the cow must be avoided, the milk should be artificially heated to 140°, as soon as it is drawn, and it should be allowed to cool gradually, be well aired whilst it is cooling, and its surface should be exposed to pure and gently changing air, as long as it is kept.

TEMPERATURE.

A proper and uniform temperature at which milk should be kept for raising the cream, say 58 to 60 degrees, is also very important. This it is impossible to secure and perpetuate in a dry vault, or spring house, if the apartment is well ventilated, unless *ice* is used.

But with the adjunctive influences of a properly constructed ice house, by which to cool both the water bath in which the milk is set, and the air of the dairy room, it is feasible to change the air as often as is necessary, and yet maintain the most desirable temperature, and by the aid of a heater in the dairy room, requiring but a nominal amount of fuel, the temperature may be controlled equally as well in January as in July.

J. WILKINSON,
Consulting Agriculturist, Baltimore, Md.

(TO BE CONTINUED.)

GRAPE CULTURE.

For the Maryland Farmer.

FORMATION OF VINE BORDERS, AND CAUSE OF GRAPES SHRIVELING.

The borders both within and without the house, should be prepared, by being, in the first place, rendered perfectly dry by draining, or otherwise. And this should be done in a substantial manner, for after they are formed, and the vines planted it cannot be so effectually done, and it is of the utmost consequence to the future welfare of the vines, that they should be placed on a dry bottom. Their roots naturally extend to a great distance in quest of nourishment and are therefore apt to penetrate beyond the limits of borders which are too scantly formed for them, either in depth or breadth. When they extend beyond the limits of prepared borders if the soil be naturally cold and damp, the fruit will not be of fine flaver and consequently many of the berries will shrivel, assume a sickly color, and ripen prematurely, and be not only destitute of flavor but actually sour. The foundation of the borders should be well drained, and a floor constructed so that the roots cannot penetrate it; over this floor a stratum of lime rubbish, shell or similar matter to the depth of six or eight inches. Then prepare the border in the following manner: one-half of turf from old pasture, where the soil is a sandy loam, one-fourth of good garden mould, a strong loam, one-eighth of good rotten stable manure, and one-eighth of broken bones, lime rubbish, shell, &c., and let the whole be well incorporated by frequent turning over. Then let it be laid on the prepared bottom to the depth of at least three feet and thirty feet wide. Borders prepared in the above manner, under good management, will not fail to give satisfaction.

But still it cannot be too forcibly and frequently impressed on the minds of those who undertake the cultivation of the grape vine, under glass, that with the possession of mere theoretical knowledge a failure will most likely be the consequence.

The knowledge of the management of the grape is not to be obtained by pertinaciously adhering to one particular system, however recommended by high and celebrated names. There are various and other important points to be taken into consideration, the particular knowledge of which is only to be acquired by the most constant perseverance, and the most unremitting industry, and by reducing the principles of theory to the certain and infallible test of practice.

WM. LINEKER.

A TEN DAYS' TRIP.

FIRST DAY.

We left our own county parched and baked with one-fourth of a tobacco crop, only a few oats and potatoes, a fair wheat crop, and three-fourths of a corn crop, the protracted dry weather showing its baneful influence throughout the section.

The September meeting of the State Agricultural Society—the first since the vacation—was attended in Baltimore.

The President and Committee of Arrangements have made unusual preparation for an excellent exhibition at the Fair Grounds at Pimlico: the difficulty of getting to the grounds has been greatly diminished and new features of interest—the manual labor of the Governor and Mayor, the plowing match, &c.—have been added to ordinary attractions.

That night we left for Jersey City: before reaching this place we saw the results of draining on a large scale: thousands of acres of the "Salt Meadows" have been reclaimed from the water and large crops of hay are now cut on them, some of the hay was stacked on the field: here is a lesson for Maryland: many of her large tracts of low waste land could be profitably drained by prosecuting the work on a scientific plan, and fevers and mosquitoes correspondingly diminished.

We have no comments to make on the Great Metropolis—New York—from an agricultural stand point, but read a lesson on culture in the appearance of one of the most beautiful cities,

BROOKLYN.

Here is a city of four or five hundred thousand inhabitants, which not only brings the country to its doors, the meats, vegetables, dairy productions, &c., but stretches out its fair arms and gathers into them the peculiar features of polished rural life: its floral display made me blush for rural Maryland, and indicated the extent and the esthetic grandeur of the work which lies before the Maryland Horticultural Society.

The flowers of Brooklyn are everywhere: in beds and urns, and vases in front of the houses where a constant display was visible: in the back yards enclosed in high board fences, showing the existence of the true taste which cultivates flowers for love as well as display—(we saw in one of these retired spots a mass of fragrance and color which in splendor and variety would have done honor to any exhibition) in the public parks and by places, the same taste spoke volumes for the refinement of the people: its parks are numerous and beautiful: Prospect is undergoing constant improvement: Fort Green occupies high and healthy, and picturesque ground, and is receiving care and culture: Tompkins and others offer an embellished promenade, and Lefferts is a beautiful country, in the city, with shade and grove and song. We cannot leave the description of one of the most refined, cultivated and beautiful of cities, without reference to Clinton Avenue, one of the finest streets in the world. This avenue is a perpetual exhibition of the best side of human existence, combining in one straight drive and promenade hundreds of gardens of exquisite beauty, filling the air from fountain and parterre with freshness and fragrance; varied by the green of country meadow, in its well kept lawns, and the grandeur of country forests in its grand old trees.

Brooklyn, from a height of marble, and gold, and brown stone splendor, has reached out after the best phase of rural life and said, "abide with me," and busy feet, and harp, and timbrel, and a flood of happiness celebrate the nuptials, and for those two—city and country—wedded in strength and loveliness, is an abiding joy.

THE THIRD DAY

was one of rush: nine different conveyances—cars, boats, wagons—and a pair of legs for three or four miles over a dusty road, took us into the interior of the State.

The agricultural peculiarity of New York is the diversity of its products; it has no one staple—nor half a dozen—for its money crop: while it raises corn, oats, tobacco, wheat, (spring and winter,) barley, potatoes, hay, vegetables, fruits, flowers, and dairy products, and makes money out of them all, it appears so attached to diversity as a system, that it harbors no specialty to any great extent, not even in localities: there are regions where more attention is paid to certain products by virtue of adaptability or location, but as a general rule of action, variety, *number* of products, is the spur of their activity: hence a failure of any one crop is only a partial failure: hence also the report of the yield and condition of its crops for July shows about an average in all: there are no serious losses to record: grass, hay, however, is the principal crop, and we were struck while riding through Westchester county—hilly and beautiful—with the contrast between the living green of its landscape and the brown sterility of our southern plow lands.

THE FIFTH DAY

found us in Baltimore at 4:30, A. M., and we left it at 7, by the Northern Central for Cockeysville.—Let us give due praise to Maryland. In a tour of many hundred miles, the country through which we here passed was the most beautiful we saw in

our travels: this is faint praise, for this region is not only comparatively, but standing upon its own attractions, absolutely beautiful: the fine houses, neat fences, pretty out-buildings, the green and wooded variety of the landscape, the taste and culture displayed in grove, and garden, and lawn, the fertile fields, and the advanced cultivation given them, and last and best, the calm splendor of Lake Roland, the central gem of all this loveliness, reposing like a monarch conscious of the glitter and power of surrounding state, all these features make of this section and the Western Run Valley, and adjacent country, a spot which one could long for and love after once seeing it, even from the delights of an oriental arcadia.

The above is not the language of partiality, it is a just description.

THE BALTIMORE COUNTY FARMERS UNION CELEBRATION

was held on Cockeysville Camp Ground near Ashland, on our fifth day, (September 8th, 1874.)

The embellishment of the stand and grounds last year was conceded to be one of the most attractive ever seen in the State. This year the grounds were still more tastefully ornamented, eliciting the admiration and commendation of those who had traveled and seen many decorations of the kind.

Immense stalks and ears of corn, sheaves of wheat, oats and barley, festoons and wreaths of evergreen, garlands of flowers, pot plants, and vegetables, indicated the combination of taste, refinement and good farming, which make up the best conditions of the rural life.

Baltimore county in its last festival or harvest home, has set an example of excellence, not only to Maryland, but the whole Western Continent, and those who labored so long and so earnestly to make the affair a success—we cannot give names at this time—the reward goes with the deed, and not with the publication of it—deserved the eulogy of one of the speakers, who, in speaking of their "triumphal arch," called them "the salt of the earth, the nobility of the land, brilliant with regalia which mirror the smiles of archangels."

The salutatory address by General Jones, President of the State Agricultural College, was an instructive review of the relation between agriculture and other branches of industry.

The next speaker, Henry C. Hallowell, of Montgomery county, showed the highly educated practical farmer, who delivered a practical discourse on the best practice of our vocation, in eloquent, elevating, and entertaining language.

Prof. Hutton, of the State College, spoke next in a compact argument on the close relation of science and agriculture: this was the appeal of the man of science to the men of practice, for a welded union of the two necessities, and a thorough co-operation in the labors of the pilgrimage.

Dawson Lawrence of Howard county, delivered a five minute valedictory address in conclusion, after which came the basket festival, with abundance, and hospitality, and variety, and excellence, and the interchange of sentiment, and re-union, and the strengthening of the tie which brings mankind together, and makes them brethern and peacemakers.

After dinner, music and dancing followed till dark: a day of happiness for all, showing what farmers and their wives can do through the mystic agency of co-operation: we leave the subject by calling especial attention to the high tone of the intellectual features of the entertainment, and to the effect which the constant strokes of such gifted and vigorous minds must have upon our agriculture, and our modes of thought and living.

THE SIXTH DAY

was spent in driving through the country: we called upon Captain Thomas Love, a description of whose farm, buildings, and mode of proceeding, would form an interesting and valuable contribution to our agricultural literature: one peculiarity appeared to strike us as prominent in the Captain's system — the application of practical science to every branch of his business to facilitate work and save labor: we shall confer a favor upon your readers at some future time, by going over the ground and giving details of operations at Loveton: we greatly enjoyed the lunch furnished by the Captain's generous hospitality, and drove next to the Pearl of Western Run Valley, Edwin Scott's farm.

We do not know the origin of the name, but certainly found the place worthy of it as it was bright with all manner of gems when we arrived there: after dinner we looked at some corn which was as fine a piece as we ever saw: it was planted in double rows about a foot apart, and about five feet between the rows: some of this corn was estimated at twenty-five barrels per acre: and of two plots of ground, the one to which the least manure and the least fertilizers were applied contained the most corn. Mr. Scott has also a tan yard and grist mill in active operation, a turnpike to Baltimore for marketing facilities, orchards with abundance of fruit, a fine yard of cows—truly it is a pearl on whose possession, and the other gems referred to, the owner may justly be congratulated: this section is within the sphere of the operations of the

famous Gunpowder Club, Thomas Gorsuch, Secretary, a gentleman of marked culture and distinguished ability, filling also the post of Recording Secretary of the Farmers' Union, a true knight in the cause, and a leader in the intellectual elements of the agriculture of his section.

With such men as we are writing about persistently working for the improvement of Maryland farms and Maryland farming, we will soon make of one a garden, and of the other a model.

The next drive brought us to Hayfields, the farm of John Merryman, Ex-Treasurer of Maryland: from this place a fine view is obtained of the surrounding country, and the good order existing; the well kept and beautifully arranged lawn, the abundance of grapes and pears, the variety of flowers and tropical plants, indicate the taste and good farming of the proprietor: our visit was a short one, and as the owner was absent we did not see the fine Hereford cattle for which the place is famous.

A short drive brought us to the highly ornamented grounds of John J. Wight, of which I gave you a brief account last year. The residence is on one of the finest building spots in a county which is full of fine elavations for building: a beautiful and extensive view of all the country is here obtained, and in the distance may be seen the buildings and court house tower of the seat of Government, Towsontown: since my last, two large lawn globes of blown glass lined with quick silver have been added to the lawn, with an effect which is indescribably beautiful, and in the play of light, and cloud, and shadow, and reflection, as strange as beautiful: an artist has been dispatched from a northern city, we understand, to draw some of Mr. Wight's choice evergreens for illustration, in a publication. A bounteous enjoyment of Mr. Wight's hospitality closed a day of pleasure for our party, and we drove in the night to Mount Repose, the residence of Wm. Webster, Corresponding Secretary of the Farmers' Union, famous for good words and generous work in the enterprises of the State designed for the welfare and happiness of its people.

The seventh day brought us back to Baltimore, at which place we attended the First Annual Exhibition of the Maryland Horticultural Society, at Lehmann's Hall.

This exhibition shows first, that we have something worth exhibiting, and second, that we have men that know how to exhibit it. The display of fruits, flowers and vegetables, was not only a beautiful one, but an astonishing effort of individual exertion, by means of the developing, organizing, inspiring power of co-operation.

Have we not said enough in this letter to drive every farmer into doing something through co-operation for the elevation of his calling: "co-operation" was hung in green letters on the stand at the Farmers' Union Festival: let clubs, and granges, and individuals, take up the cry and roll it over Maryland and back again, and our white banners will soon float triumphant in every breeze.

The ninth day was one of long driving towards home, and on the morning of the tenth day we stood "within the temple," very much fatigued physically, from our vacation, but very much invigorated and inspired mentally, to push on the columns in the on march of reform. *

MARYLAND JOCKEY CLUB—FALL PIMLICO MEETING.

The Maryland Jockey Club has put forth a programme of unusual attraction for the Fall Meeting of 1874, which will take place on the 20th, 21st, 22d and 23d of October. The value of the purses and stakes amount to about $30,000, and as nearly every first-class horse in America is engaged, the meeting is expected to be the most interesting that has ever taken place in Maryland. The great event of the meeting, and probably the greatest race of the season, will be the Bowie stakes, the entries for which closed here recently. The race is four mile heats, and it will be remembered that True Blue and Harry Bassett contested for it last year, but the former proved an easy winner. This year, however, there are eleven entries, and they are all first-class horses. The great rivals, Tom Bowling, Fellowcraft ahe Preakness, are to meet in this city, and as it will be the first appearance of Tom Bowling on the turf since his reported breaking down at Long Branch, thousands will no doubt attend merely to see him struggle for the race that will decide which is the greatest four mile horse in the country. It is fully understood that Tom Bowling is now thoroughly restored to a first-rate condition, and is as good a horse as ever.—Maryland will be represented in the race by Governor Bowie's b. h. Catesby, by Eclipse, dam Katie and his b. c. Piccolo, by Concord, dam Mandina. The latter was bred and raised by Mr. E. A. Clabaugh, and is the first representative on the turf from his fine stock farm in Carroll county. It will be remembered that Piccolo scored his mile and an eighth at Saratoga in 1:56, which is the fastest time on record for that distance. The other entries are A. B. Lewis & Co.,'s b. m. Bessie Lee, by Hunter's Lexington, dam by Chorister; William Jennings' ch. h. Silent Friend, by Australian, dam Springbok by Lexington. Both of the last named horses have run successfully in four mile races. J. W. Hunt Reynolds enters b. h. Whisper, by Planet, dam Mattie Gross. Whisper has won several races at Long Branch, Saratoga and Fordham during the past season. M. A. Littell enters his famous ch. h. Fellowcraft, by Australian, dam Ærolite, that recently run four miles at Saratoga, beating Wanderer and Kate Pease in the remarkably fast time of 7:19½ which is the best on record for that distance. Mr. H. P. McGrath enters the renowned Tom Bowling, by Lexington, dam Lucy Fowler. Mr. M. H. Sanford enters his favorite bay horse Preakness, whose past career as a racer was first class. Mr. W. Cottrill enters bay horse Littleton, by Leamington, dam by Lexington. This horse is among the finest in the country. The other entries are Joseph Donahue's gray mare Lizzie Lucas, by Australian, dam Eagless, and A. M. Barton's chestnut horse Jack Frost, by Malone, dam Kitty Puryear.

The Bowie stakes will be worth to the winner about $6,000, and as the Dixie has sixty-eight entries, Central twenty-eight, and the Breckenridge sixteen, the fall meeting of the Maryland Jockey Club cannot be but brilliant.

POTOMAC FRUIT GROWERS SOCIETY.

SEPTEMBER SESSION.

This Society met on the 1st inst., at the Board of Trade Rooms, Washington, D. C., with a good attendance of members, and uumbers of visitors, including several ladies — Chalkley Gillingham, President in the Chair—D. S. Curtiss, Secretary.

The exhibition of fruits was fair, especially of grapes and apples. Prof. Wm. Saunders, of the Agricultural Department, exhibited over 40 varieties of grapes; and Henry T. Scott, of Prince Georges, Md., exhibited above a dozen varieties—both lots were fine specimens.

Of apples, Stacy Snowden, of Collingwood, Va., made the best show of a dozen sorts.

An important and interesting discussion was enjoyed, in regard to mulching, cultivation and preparing soils, for fruits and other crops.

MANURES—MULCHING, &C.

Mr. Saunders gave the key note or idea, which was, that it is more important to put the land in the right *mechanical* condition, than to care for its chemical ingredients; that is, it is more important to have it well pulverized, well drained, and deeply plowed, than merely to be supplied with chemical ingredients. *Mulching* the ground, and *top-dressing the surface* with manures, was of greater importance than putting manure further underground. There is great virtue in covering and shading the surface, in securing productiveness. The sun is prevented from drying and scorching soil and plants; while the rains and moisture dissolve and carry the manure down continually around the roots, where the plants can drink it in, or absorb it. No fertilizer can be taken up by the roots till it is dissolved and brought into liquid state.—Besides, he said this *mulching* or covering the surface was a great protection against the frost, and severe changes of winter.

The views of Mr. Saunders were regarded of great importance, and concurred in by the President and most of the other members.

Street and Road Sweepings were admitted to be of much value for manure and top-dressing; as well as all stable and barn yard offals; also, leaf mold and forest scrapings, and swamp muck.

POISONING INSECTS.

The question, whether applying mineral poisons to plants to kill insects is dangerous to life, or health of those eating the vegetables, was discussed; and opposite opinions were expressed by members.

Dr. Jehu Brainerd, from the Scientific Committee, read the following paper on the subject, which was concurred in by some of the members, and dissented from by others; who did not, and do not believe that Paris green applied to the leaves and tops of potato plants in only sufficient quantity to kill bugs, can poison the tubers or potatoes in the ground; yet, the subject is worthy the thought and experiment of all persons interested in it.

Mr. President and Members of the Potomac Fruit Growers Association — Gentlemen: At the July meeting of this association, the subject of the use of mineral poison in the destruction of insects upon food-producing plants was referred to the standing scientific committee for investigation and report, as to the use of such poisons in a scientific point of view. A partial report was made in August, by the chairman and one of the members of the committee, (Dr. Snodgrass,) the other member, (Dr. Howard,) not having at that time expressed an opinion.

Your committee beg leave to report progress and ask for further time, for the reason that no hasty conclusions should be presented upon a subject involving perhaps the life and health of the people. The artificial adulteration of food has of late attracted much attention among scientific men, and there can be no doubt that poisonous substances are sometimes used, which renders the articles thus treated unfit for use as proper aliments. In the treatment of growing plants with a view to protect them from insect depredations by the use of poisonous drugs, a due amount of caution should be exercised that the plants be not poisoned. And in the investigations entered into by your committee it has been the sole purpose to demonstrate whether or not the quantity of poison used in the destruction of insect life will become so far absorbed by and incorporated into the tissues of the plant as to render them in any degree unsuitable for table use. It is well known that the rootlets of plants take up whatever substances are presented to them in solution, and if substances deleterious to the healthy development of such plants is in sufficient quantity the plants are injured or their vitality wholly destroyed. It hence follows that the plant contains such matters as it receives from the soil.

Some poisons, as lead, arsenic, mercury, are accumulative in animal system, and substances containing them in minute quantity may be for a long time used with apparent impunity, but at length develop itself in a serious manner.

In the experiments mads by your committee, the *arsenite of copper* (paris green) was used in a crude state, and highly diluted with corn meal, plaster paris and other substances, in proportion of one part of the poison to six parts of the dilutent. The plants experimented upon were beets, and the quantity used ranged from one-tenth of a drachm to one drachm to a single plant with a root of an average diameter of one inch. In every instance the vitality of the plant was injured, and the leaves showed the effects of the drug in from four to ten days. The poison was applied upon the leaves and around the plant but once, and subsequently watered to promote a natural absorption. Those plants treated with the largest quantity of poison were destroyed in six days. The roots were taken up, carefully washed and boiled in a porcelain vessel, and treated for the presence of the drug.—Traces of both copper and arsenic were found.

Whether the quantity of arsenite of copper usually used by farmers upon a potato crop would produce any marked effect upon the tubers, is a question your committee are not prepared to determine; but from the well established fact that the poisons are absorbed by the plant in sensible quantities should be a sufficient reason to proceed cautiously in the use of such poisons upon land intended for growing food plants.

In conclusion, your committee would discourage the use of mineral poisons for the purpose of destroying insect life upon food-producing plants; and recommend, instead, such as are derived, directly or indirectly, from organic or vegetable substances.

Adjourned 1st Tuesday in Oct. LAND MARK.